

EXHIBIT 1

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TENNESSEE
KNOXVILLE DIVISION**

WORLDWIDE INTERACTIVE NETWORK, INC.,

Plaintiff,

v.

CHMURA ECONOMICS & ANALYTICS, LLC,

Defendant.

Case No. 3:09-CV-00121
Phillips/Guyton

AFFIDAVIT OF TERESA C. CHASTEEN, PH.D.

I, Teresa C. Chasteen, declare and state under the penalty of perjury the following:

1. I am the President and CEO of Worldwide Interactive Network, Inc. (hereinafter "WIN").
2. It is my understanding and belief that Christine Chmura, Ph.D., is a principal, the president, and the chief economist of Chmura Economics & Analytics, LLC (hereinafter "CEA").
3. It is my understanding and belief that Leslie Peterson is a principal and the director of operations of CEA.
4. CEA alleged that it is the owner of United States Patent Number 7,480,659 issued to Chmura et al. on January 20, 2009 (hereinafter "the '659 patent"). The '659 patent is attached hereto as Exhibit A.
5. On or about September 13, 2006, CEA forwarded WIN a partially executed agreement titled *Developing a "Strategic Compass" Template for Workforce and Economic Strategic Planning* (hereinafter "the Joint Development Agreement"). A copy of the Joint Development Agreement is attached hereto as Exhibit B.
6. On or about September 14, 2006, WIN and CEA entered into a contractual business relationship by way of the Joint Development Agreement. Under the Joint Development Agreement, CEA developed and maintained a server-based economic,

education, and workforce development tool, referred to as JobsEQ, for WIN's use and promotion.

7. CEA alleged that certain of the underlying technology of JobsEQ is protected by the '659 patent.

8. On or about October 9, 2006, CEA started invoicing WIN at its Tennessee address for services provided by CEA and continued to invoice WIN at its Tennessee address until approximately March 28, 2009. Within this time frame, CEA invoiced WIN approximately forty three (43) times, the invoices being substantially evenly distributed across the time frame. CEA's invoices are attached hereto as Exhibit C.

9. On or about February 15, 2008, CEA hosted and conducted a training session relating to JobsEQ, including technology allegedly protected by the '659 patent, at the Tennessee Technology Center located in Harriman, Tennessee.

10. On or about February 15, 2008, CEA forwarded WIN a partially executed agreement, under which CEA provided WIN ongoing and continuing services relating to a particular application provided by JobsEQ. This agreement is hereinafter referred to as the Retainer Agreement and is attached hereto as Exhibit D.

11. As specified in the Retainer Agreement, CEA accessed WIN's servers, which were and are located at WIN's home office in Kingston, Tennessee, to perform its services under the Retainer Agreement.

12. On or about October 22, 2008, CEA hosted and conducted a training session relating to JobsEQ, including technology allegedly protected by the '659 patent, at the Roane State Community College campus located in Harriman, Tennessee.

13. In 2008, the business relationship between WIN and CEA began to deteriorate, and WIN and CEA began adversarial negotiations in an attempt to resolve unsettled contractual issues. WIN hired John Brock of Gentry, Tipton & McLemore, P.C., to represent WIN in these negotiations.

14. In view of the failing business relationship, WIN contracted Iradix, LLC (hereinafter "Iradix") to independently develop a server-based economic, education, and workforce development tool to replace JobsEQ. The server-based development tool

developed by Iradix is owned solely by WIN and is hereinafter referred to as WIN's server-based development tool.

15. During the course of the above-discussed negotiations between WIN and CEA, Mr. Brock reported to me that CEA, by and through its legal counsel, namely Genevieve Dybing of McCandlish Holton, P.C., expressed its belief and concern that WIN was developing a server-based economic, education, and workforce development tool to replace JobsEQ. Mr. Brock also reported that Ms. Dybing indicated that CEA intended to initiate legal action against WIN to enforce the '659 patent when WIN introduced its server-based development tool to the market.

16. On or about March 9, 2009, Katherine DeRosear, Strategic Policy Advisor of WIN, reported to me that while attending a National Association of Workforce Boards Forum in Washington D.C. (hereinafter "the NAWB Forum"), CEA, by and through its president, namely Ms. Chmura, asserted to Danny Allen, a NWAB board member and trial attorney of South Carolina, that WIN would "need a trial attorney" when WIN introduced its server-based development tool to the market.

17. On or about March 10, 2009, Dr. Tim Alford, an independent consultant hired by WIN, reported to me that while attending the NWAB Forum, CEA, by and through its president and director of operations, namely Ms. Chmura and Ms. Peterson, respectively, cautioned Dr. Alford of his involvement in the development of WIN's server-based development tool and expressed CEA's intent to initiate legal action against WIN to enforce the '659 when WIN introduced its server-based development tool to the market.

18. In a letter addressed to Dr. Fletcher Mangum, an independent consultant hired by WIN, CEA cautioned Dr. Fletcher of his involvement in the development of WIN's server-based development tool and implied CEA's intent to initiate legal action against WIN to enforce the '659 patent in the event WIN introduced its server-based development tool to the market. A pertinent portion of this letter is attached hereto as Exhibit E.

19. WIN introduced its server-based development tool to the market on or about March 19, 2009.

20. In view of the above-discussed occurrences and threats, I had an apprehension that CEA would initiate legal action against WIN to enforce the '659 patent when WIN introduced its server-based development tool to the market.

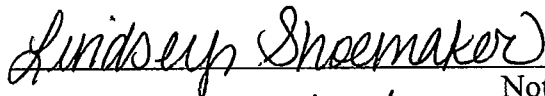


Teresa C. Chasteen, Ph.D.
CEO, Worldwide Interactive Network, Inc.

IN THE COUNTY OF ROANE

STATE OF Tennessee

I hereby certify that before me personally appeared TERESA C. CHASTEEN, personally known by me, who then and there was duly sworn by me, and under oath acknowledges that the foregoing instrument was duly signed, sealed and delivered by him on the date appearing at the foot thereof, all of which took place within my jurisdiction.



Notary Public

My Commission Expires: 9/12/11

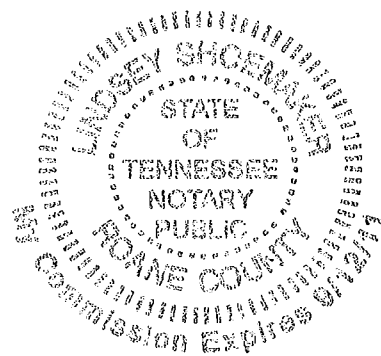


EXHIBIT A



US007480659B2

(12) **United States Patent**
Chmura et al.

(10) **Patent No.:** **US 7,480,659 B2**
(45) **Date of Patent:** **Jan. 20, 2009**

(54) **SYSTEM AND METHOD FOR MANAGING
ECONOMIC DEVELOPMENT, WORKFORCE
DEVELOPMENT AND EDUCATION
INFORMATION**

(75) Inventors: **Christine Chmura**, Richmond, VA
(US); **Leslie Peterson**, Richmond, VA
(US)

(73) Assignee: **Chmura Economics & Analytics, LLC**,
Richmond, VA (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 213 days.

(21) Appl. No.: **11/251,811**

(22) Filed: **Oct. 18, 2005**

(65) **Prior Publication Data**
US 2006/0085455 A1 Apr. 20, 2006

Related U.S. Application Data
(60) Provisional application No. 60/619,861, filed on Oct.
18, 2004.
(51) **Int. Cl.**
G06F 7/00 (2006.01)
G06F 17/30 (2006.01)

(52) **U.S. CL.** 707/10; 707/100

(58) **Field of Classification Search** 705/7,
705/10; 707/104.1, 109.1

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,054,864 B1 * 5/2006 Toomey 707/10
2004/0236598 A1 * 11/2004 Thomsen 705/1

* cited by examiner

Primary Examiner—Wilson Lee

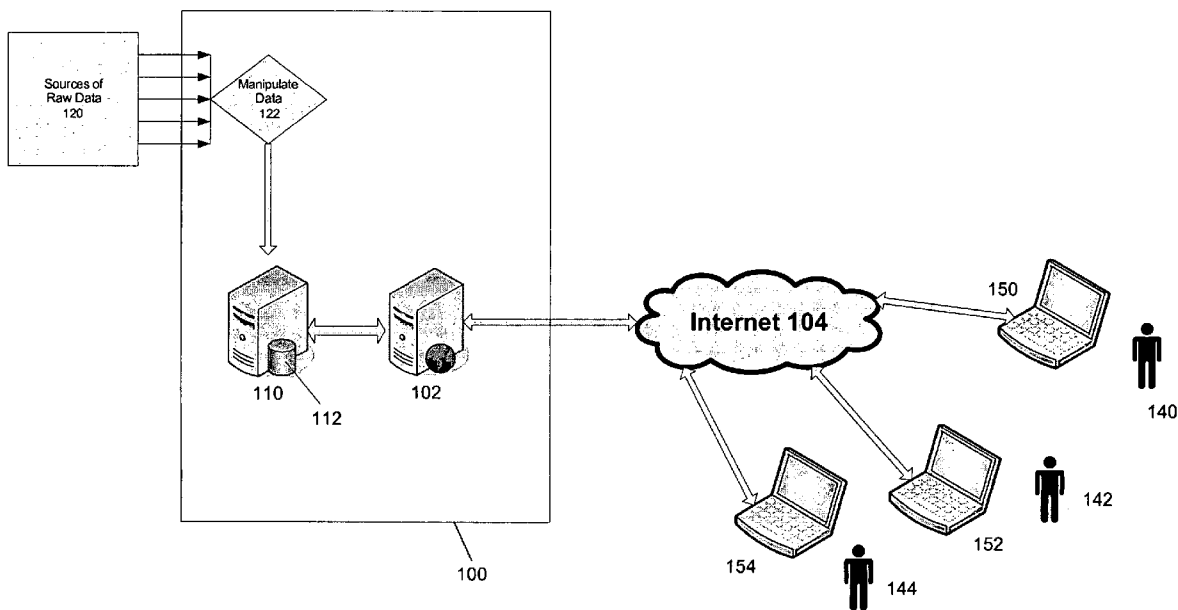
Assistant Examiner—Nicholas E Allen

(74) *Attorney, Agent, or Firm*—Smith, Gambrell & Russell

(57) **ABSTRACT**

Economic development and workforce development information, such as historical and forecasted economic data regarding economic variables including but not limited to jobs, unemployment, wages, and/or productivity, etc., and/or any changes therein are stored in a database. Access to the data stored in the database is provided via a web portal running on a data server coupled to the Internet. Users access the data using a web browser client. Data stored in the database are updated from time to time, such as, for example, monthly and/or quarterly. User tools are provided for assembling and processing the data in ways meaningful to the user.

20 Claims, 35 Drawing Sheets



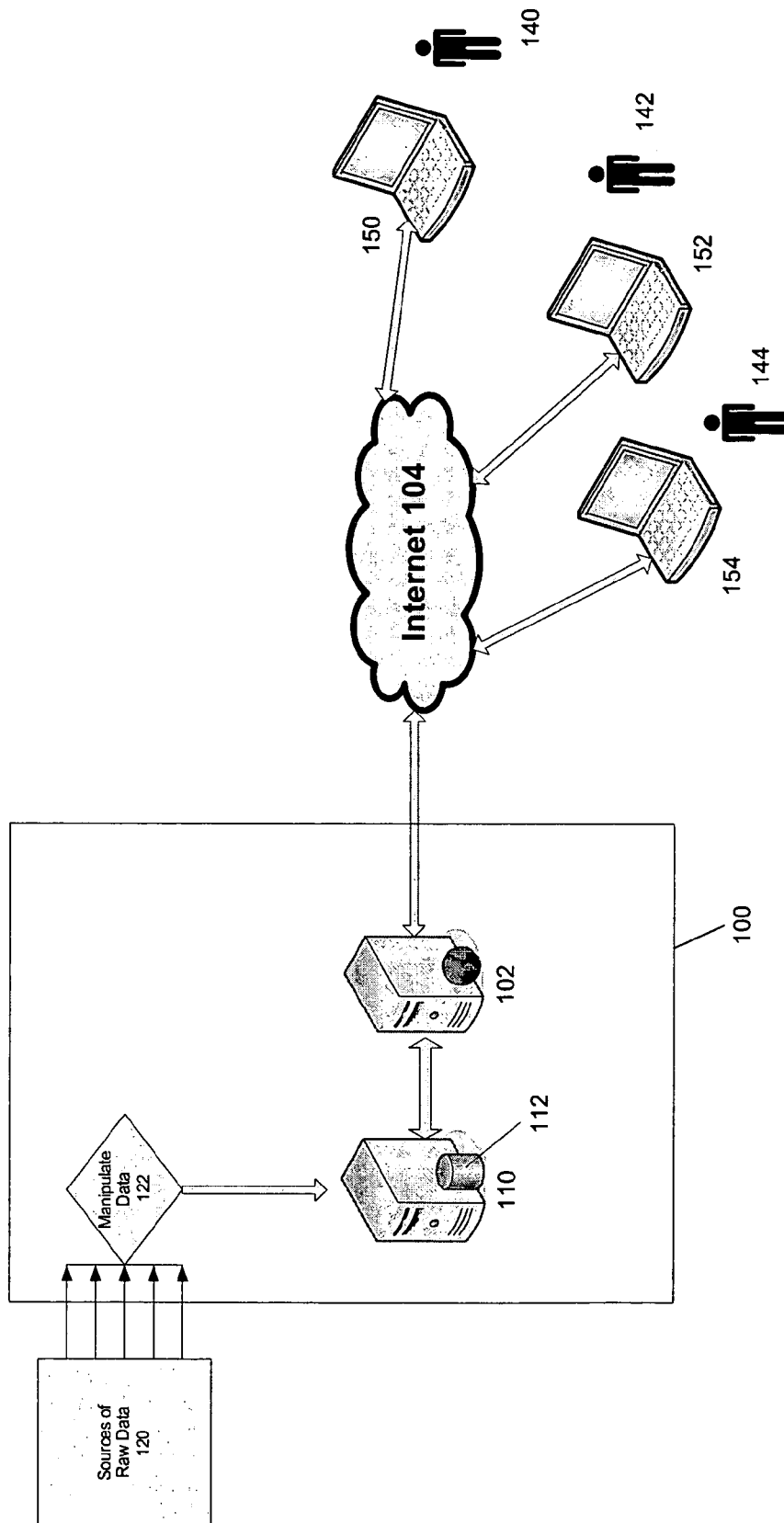


Figure 1

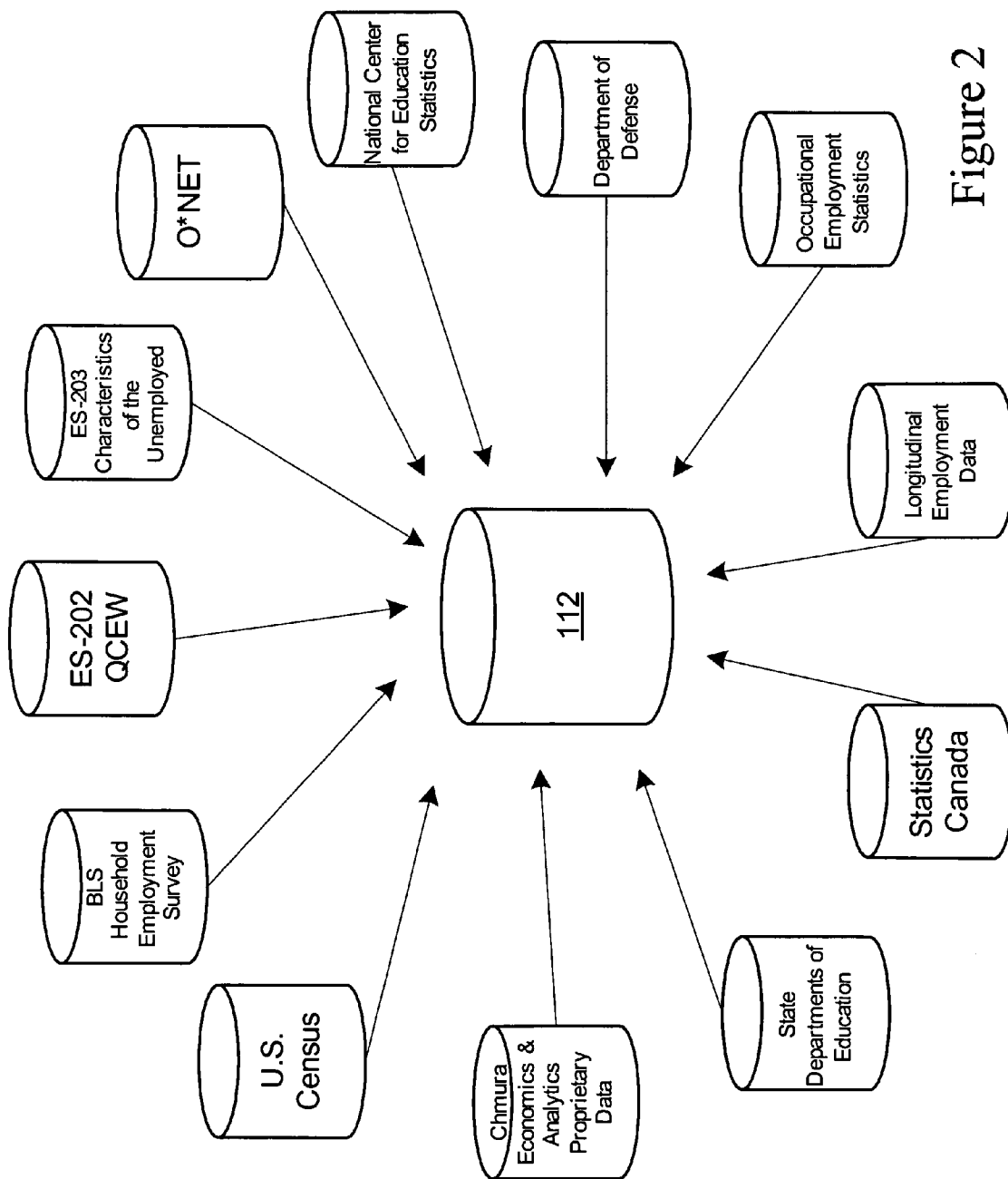


Figure 2

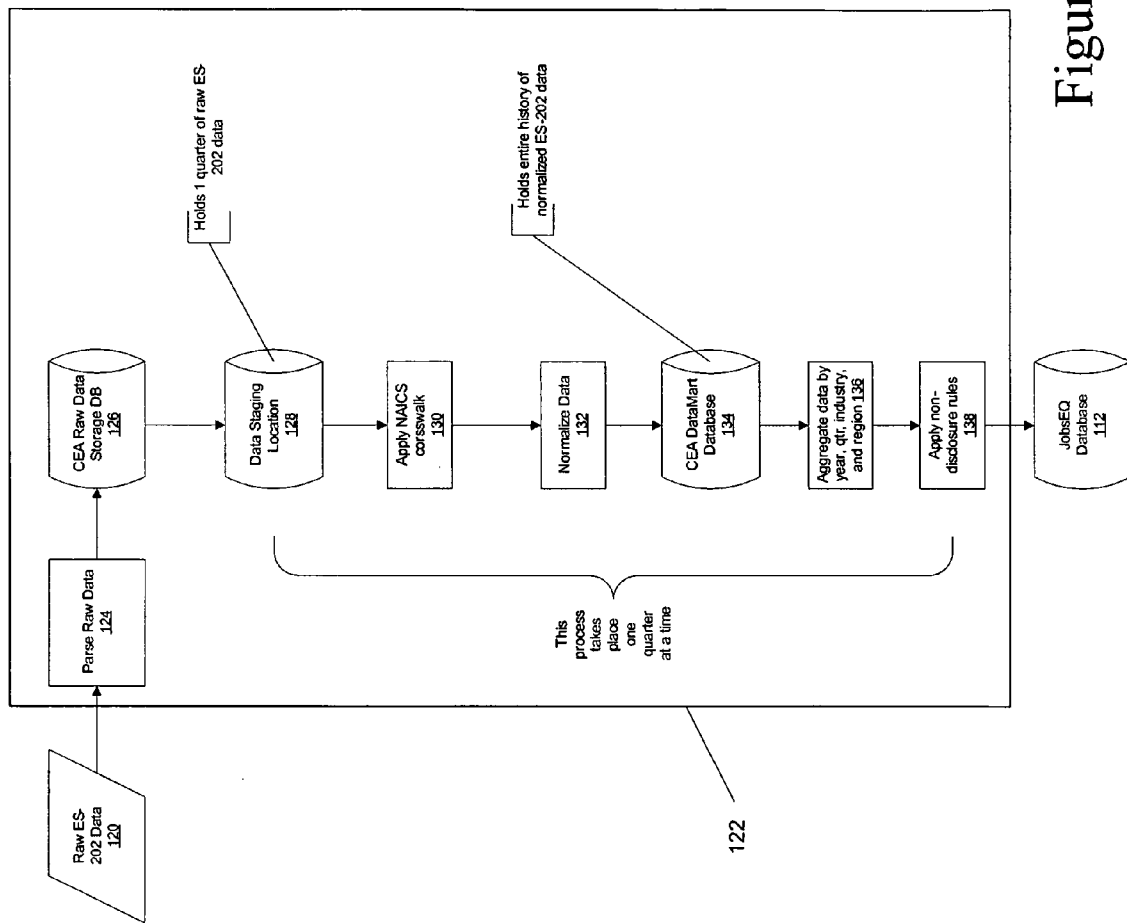


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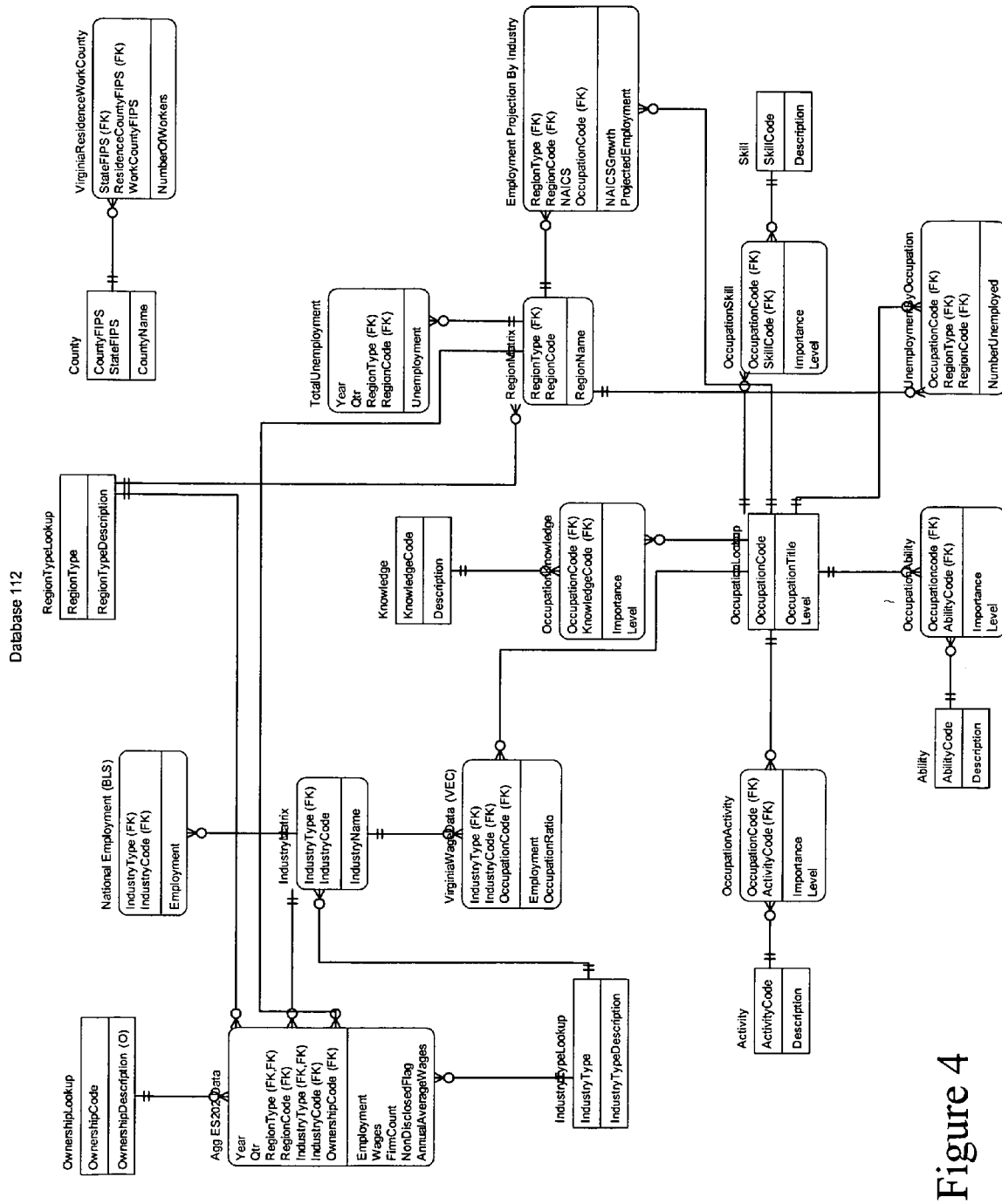


Figure 4

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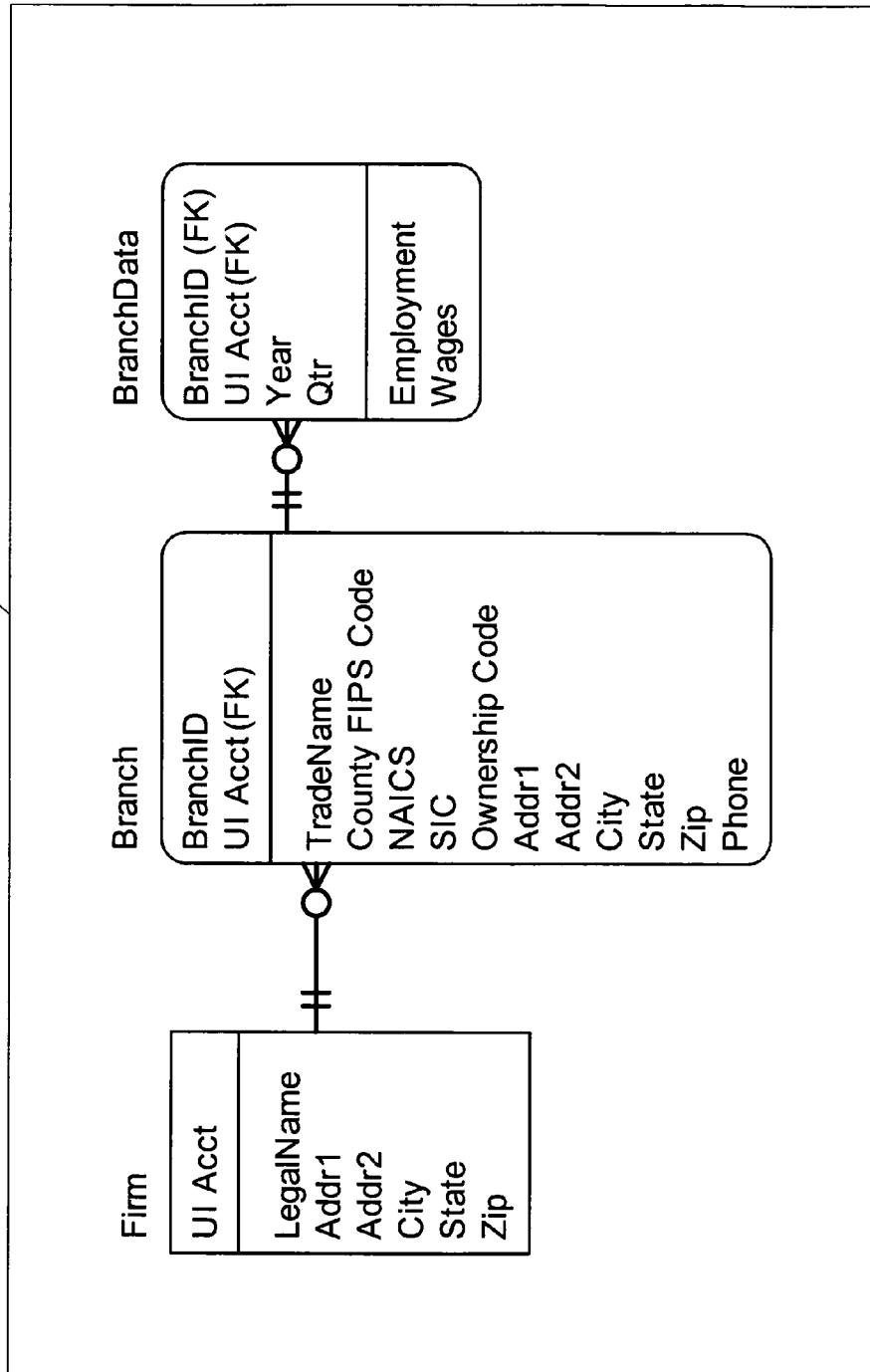


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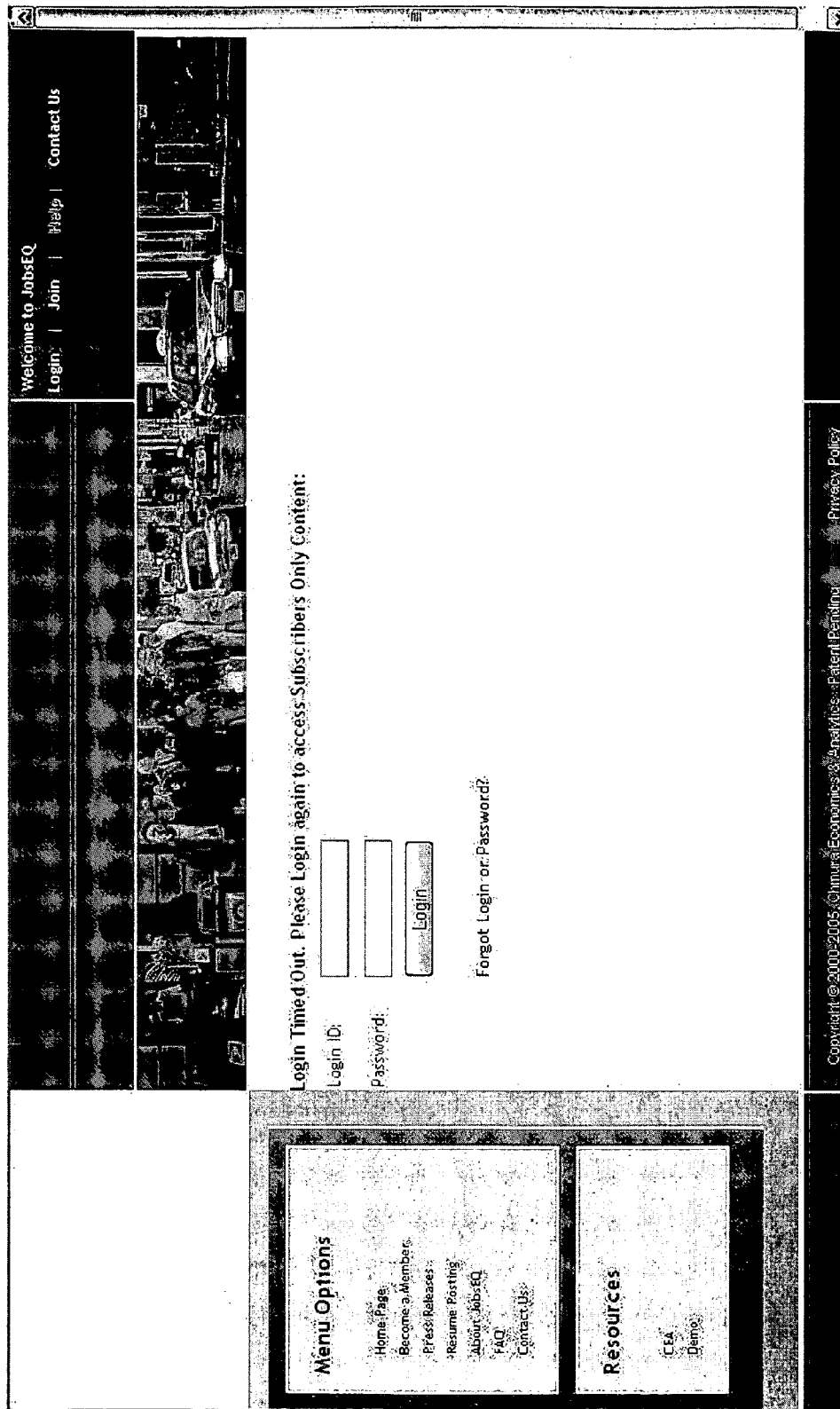


Figure 6

**Menu
Selection**

Labor Analytics

**Knowledge
Analytics**

**Career
Analytics**

**Demographic
Analytics**

**Policy
Development**

Figure 7

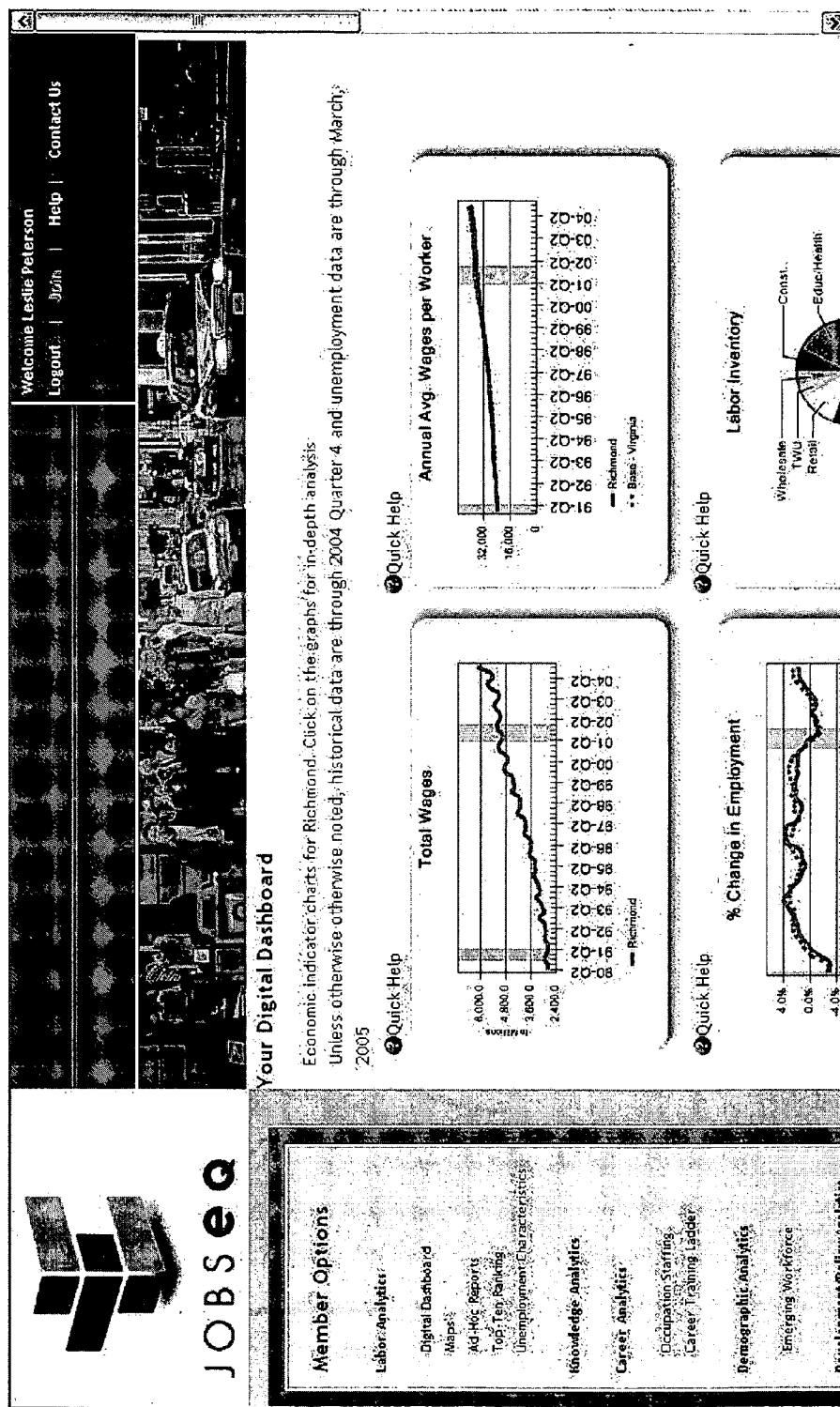


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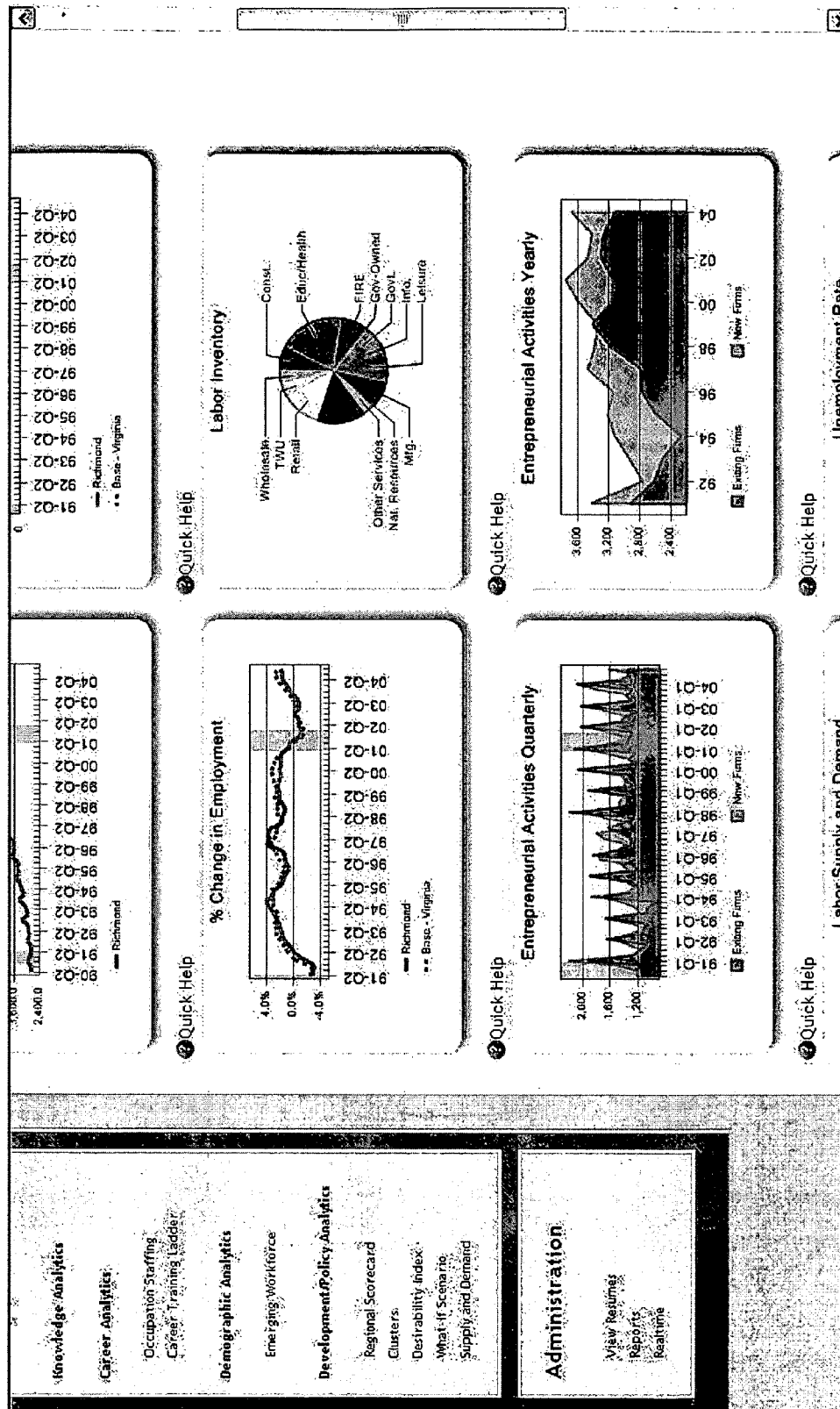


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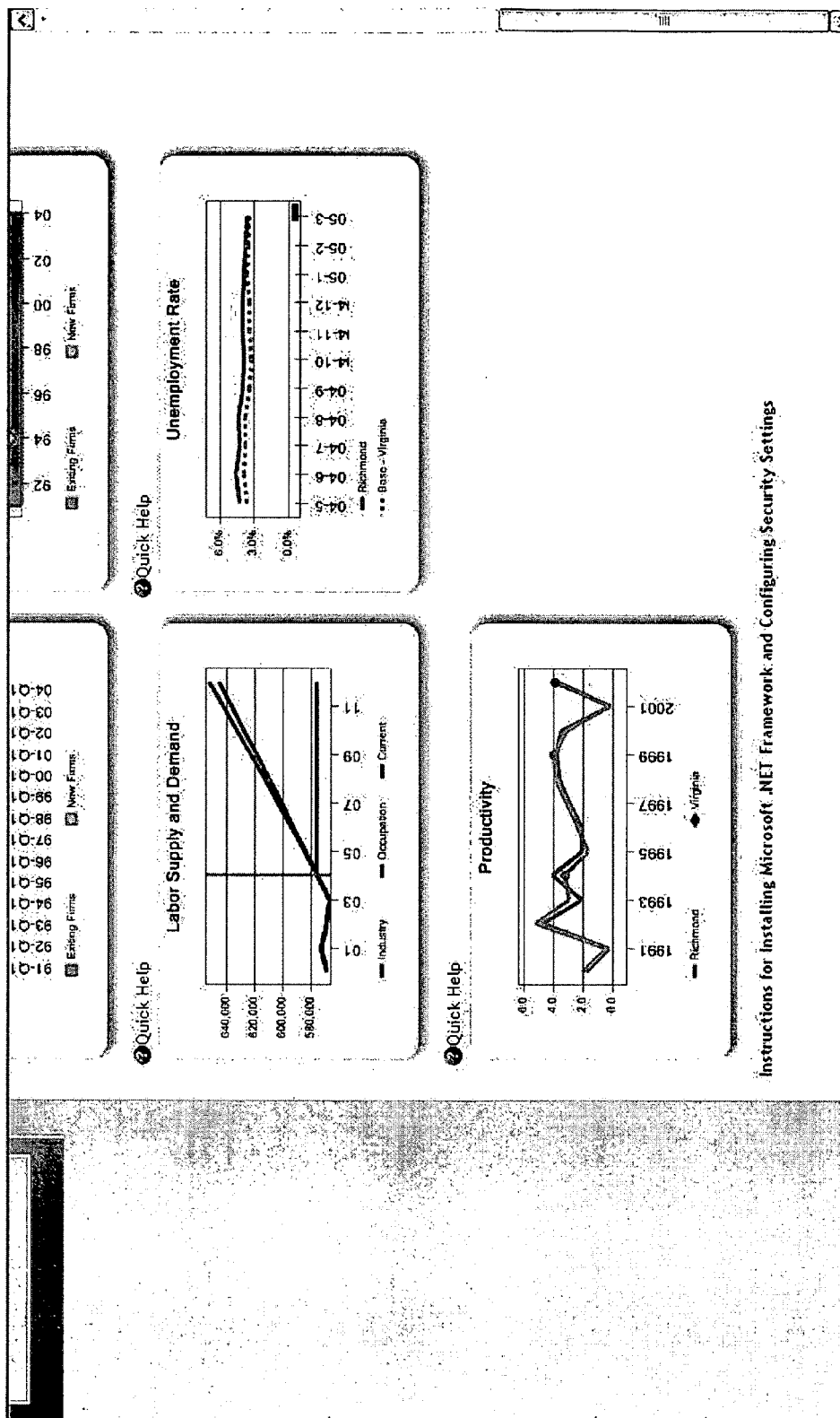


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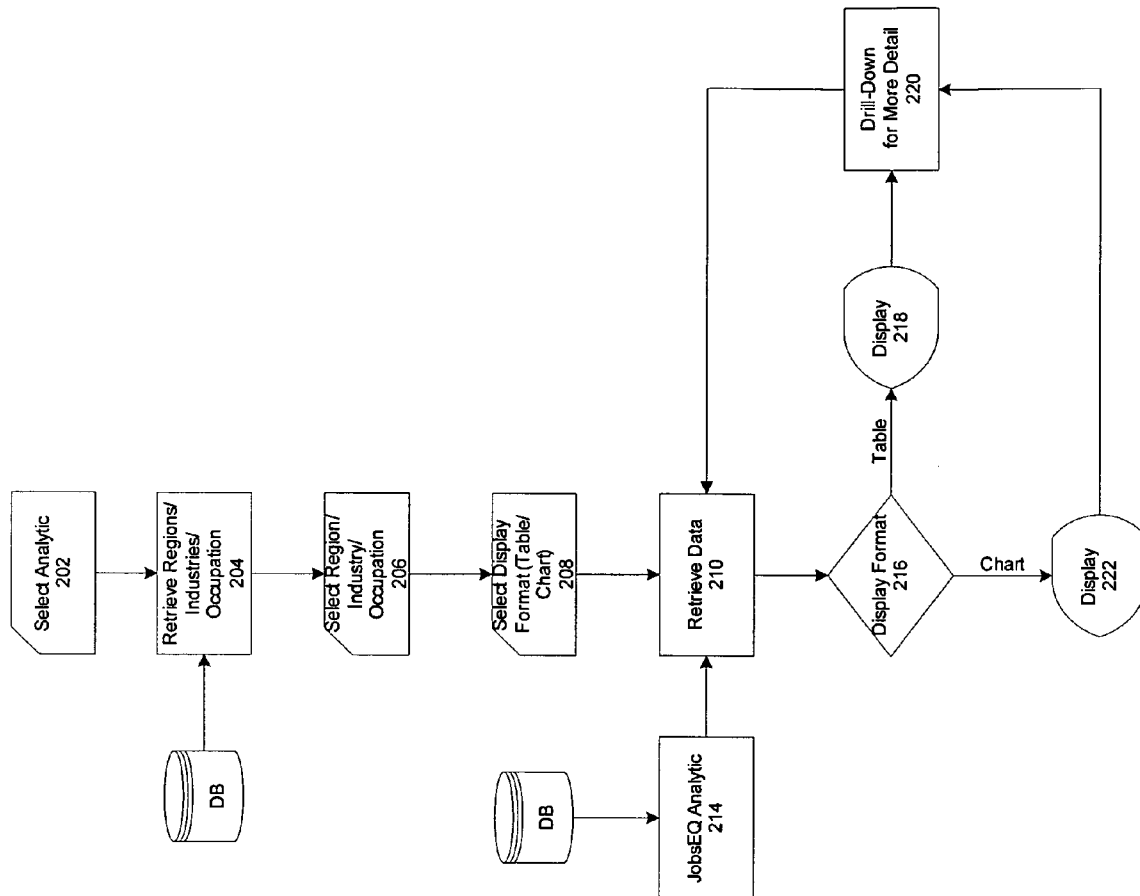


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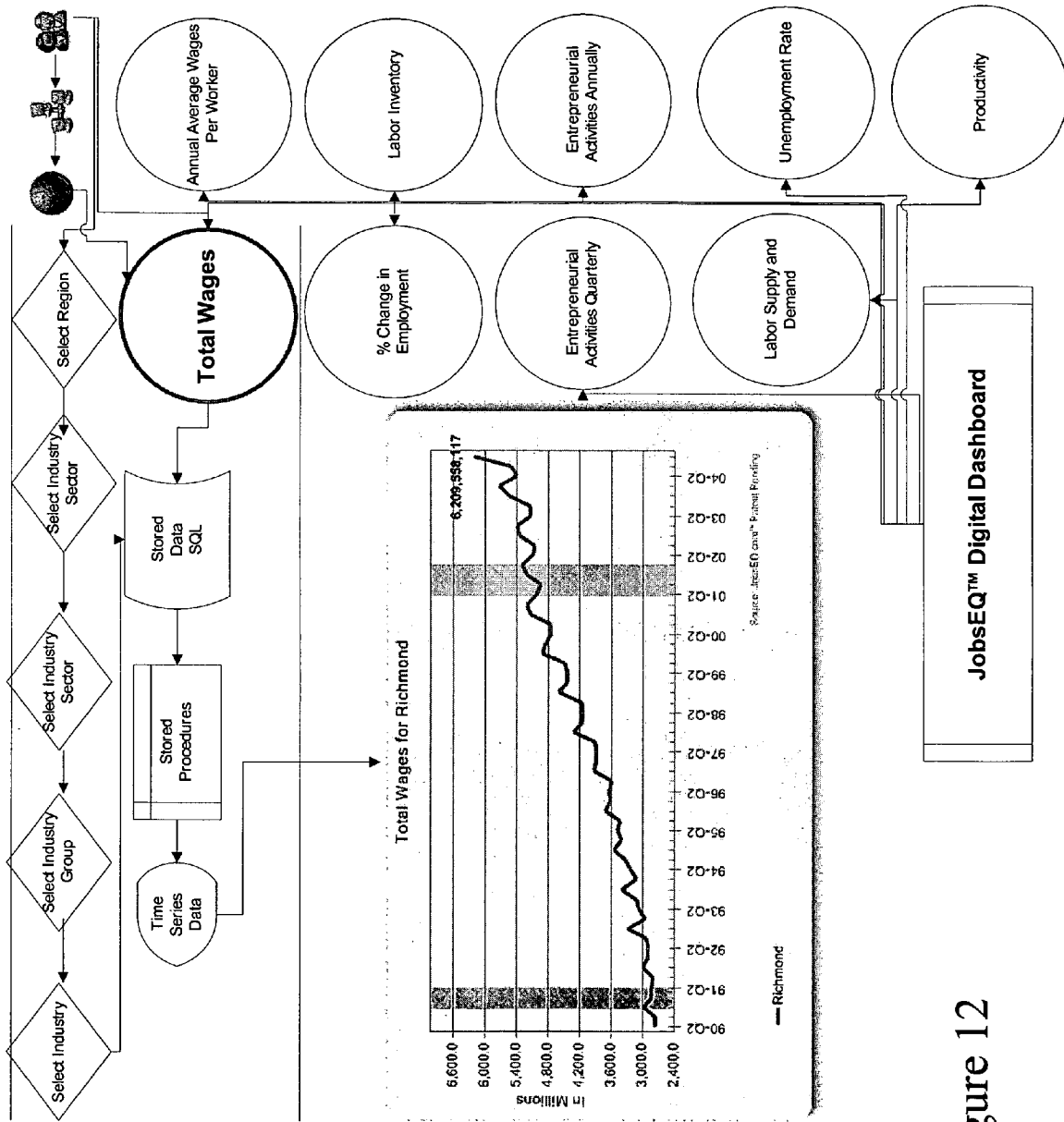


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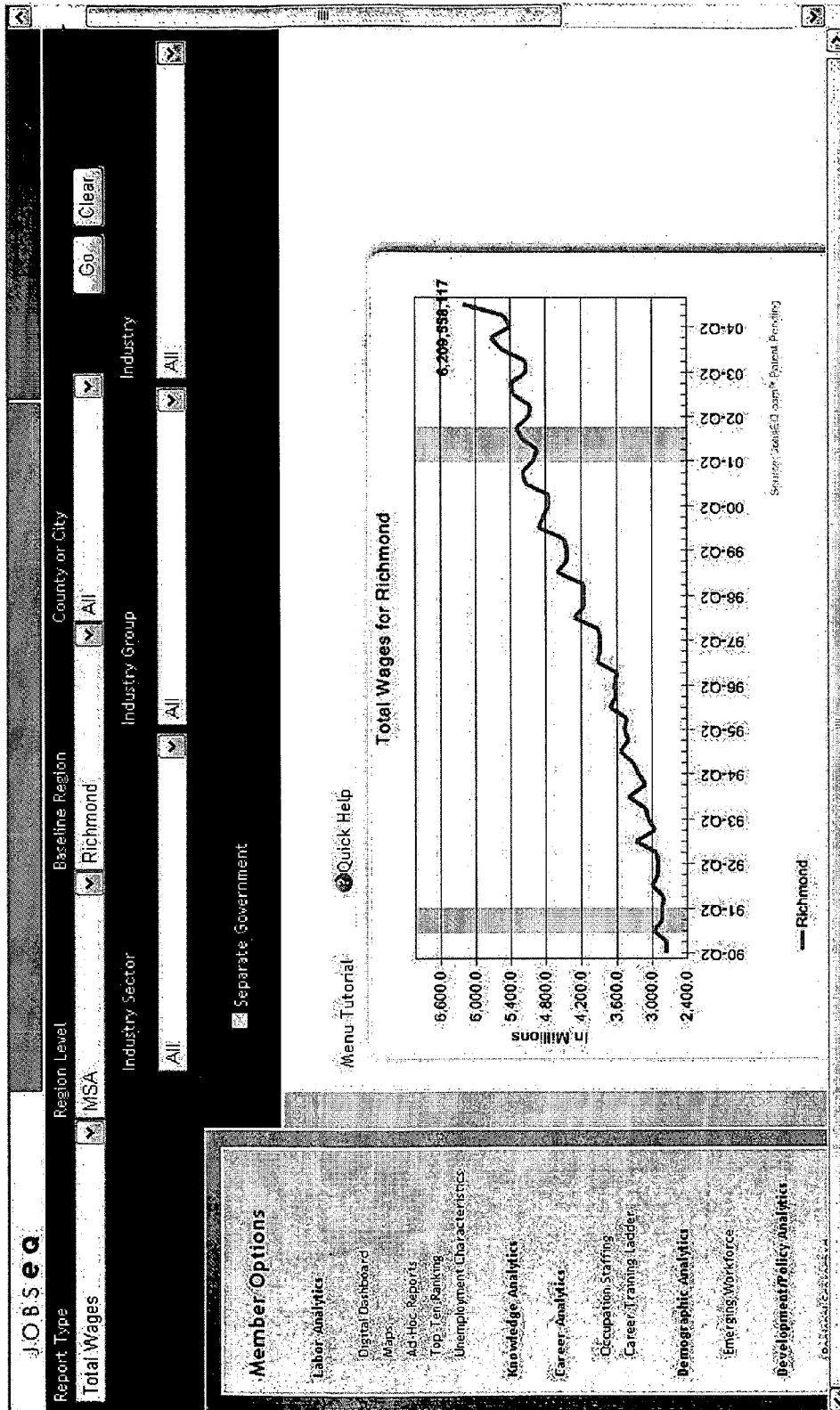


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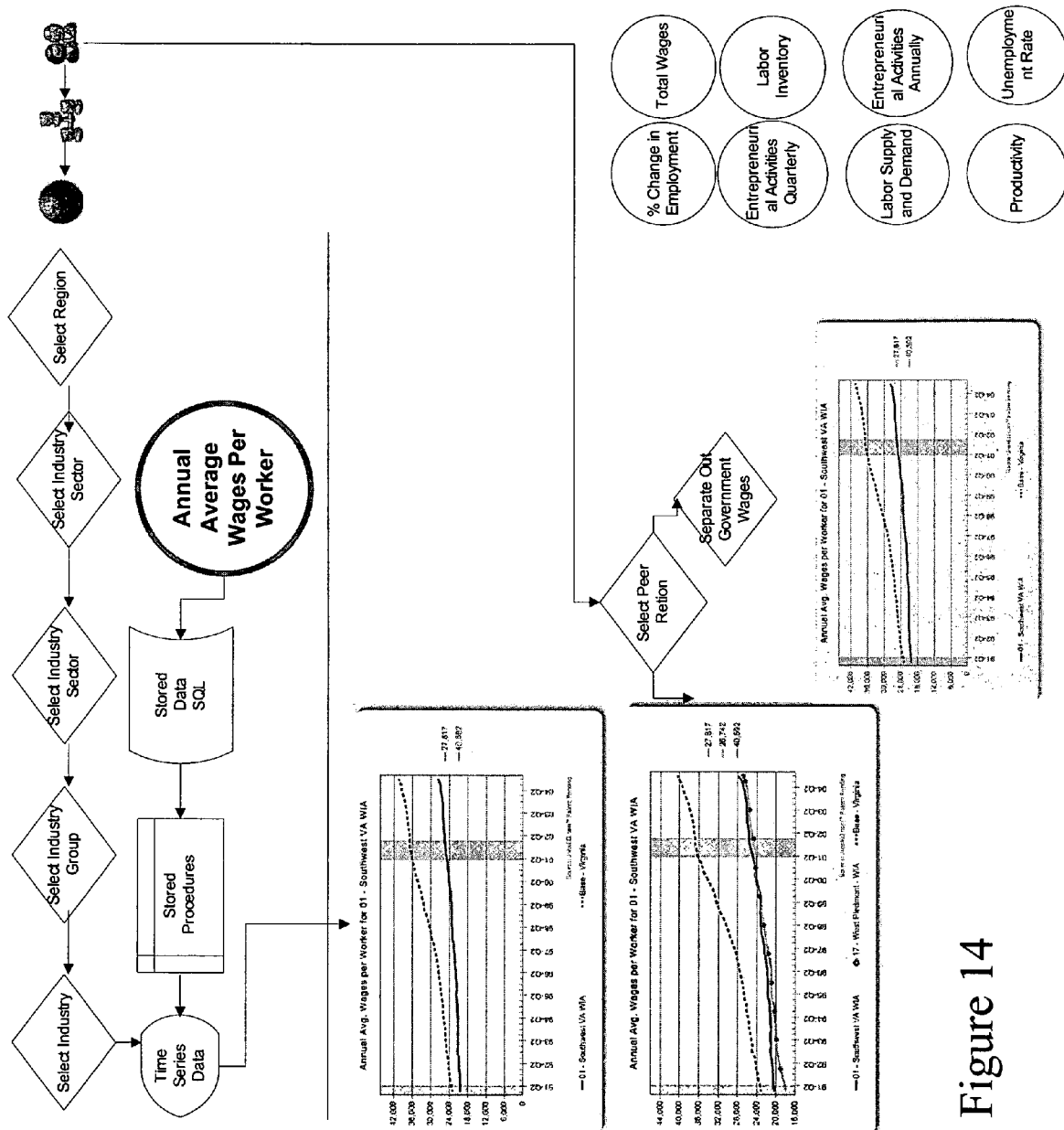
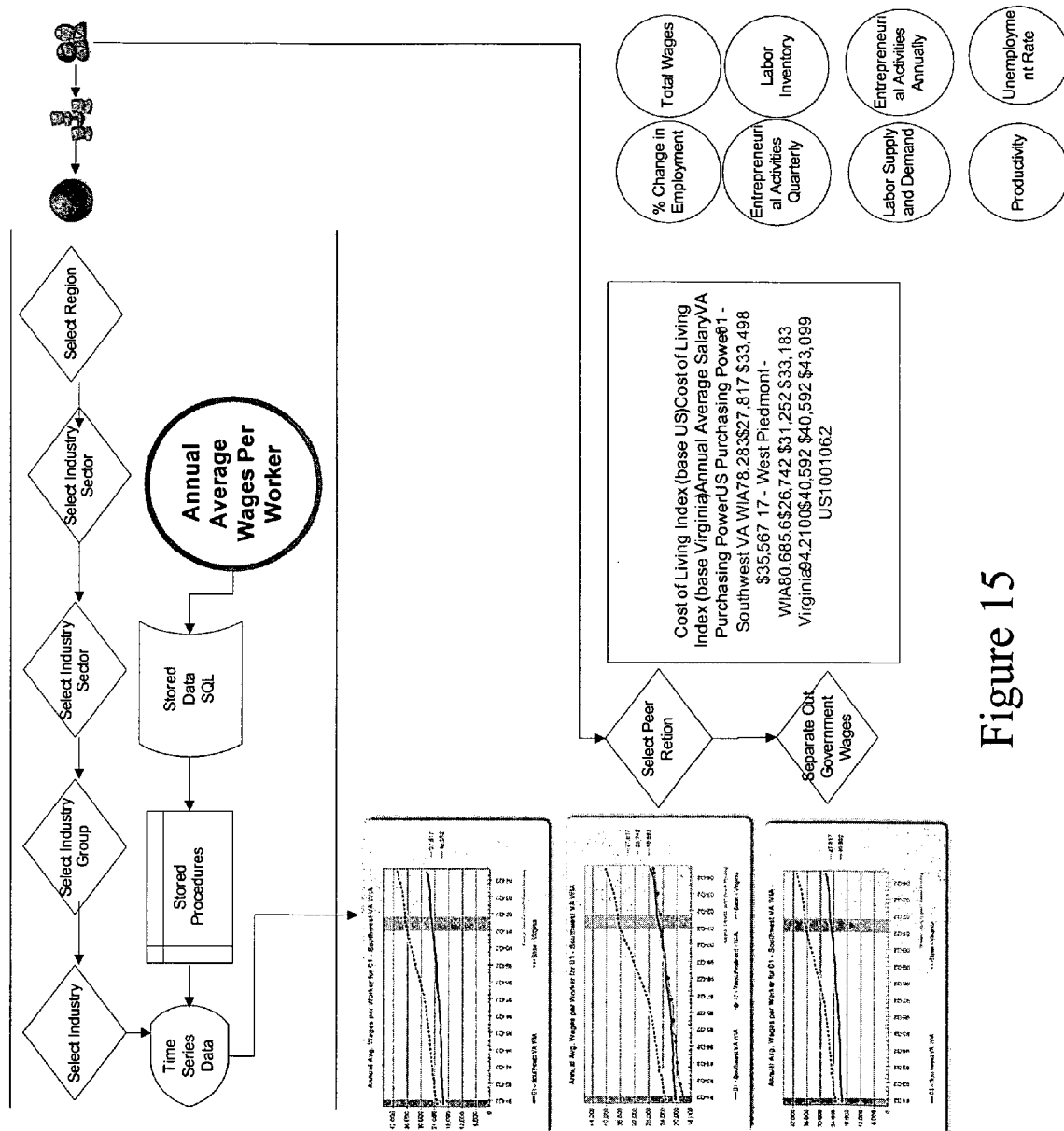


Figure 14



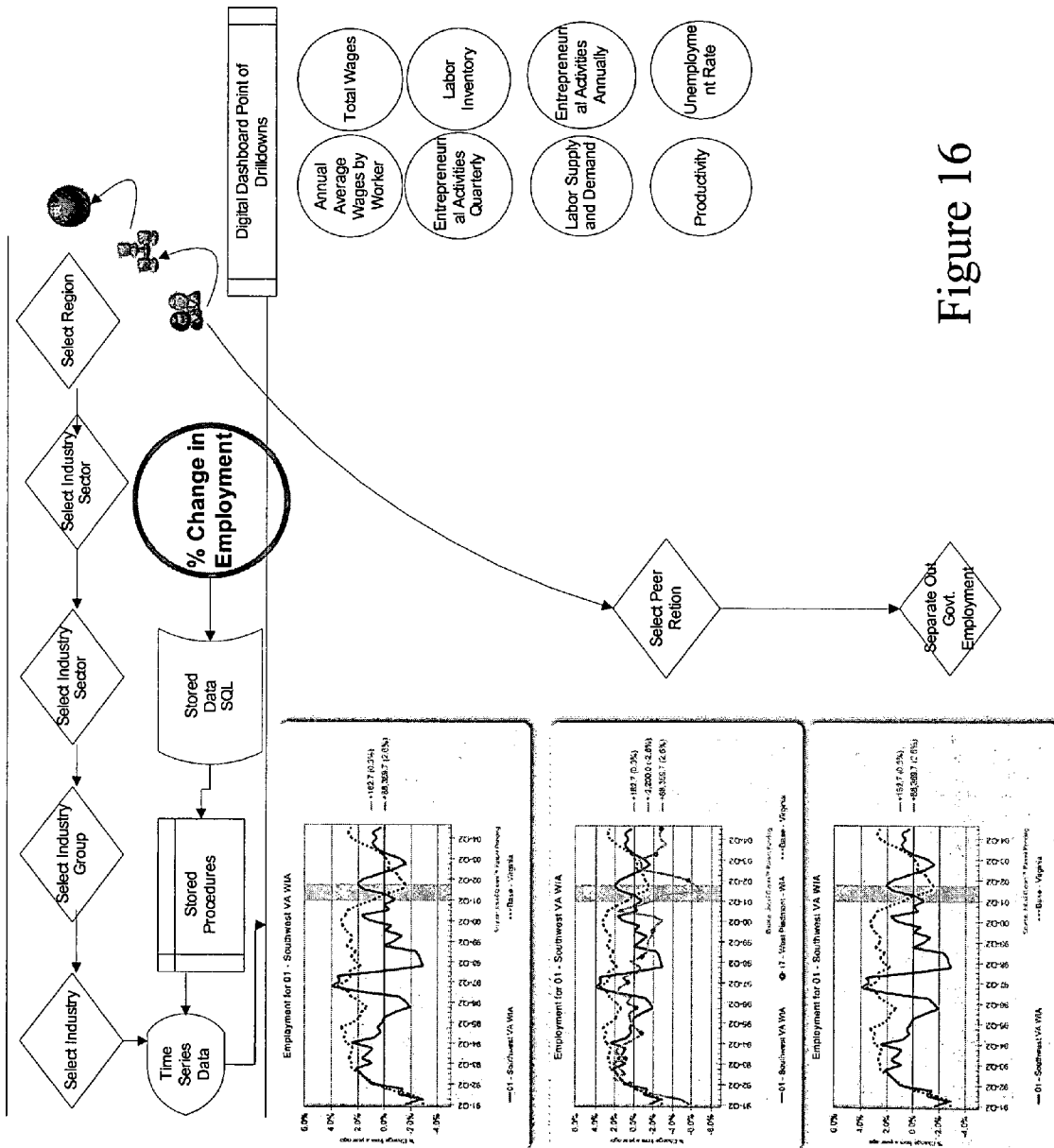


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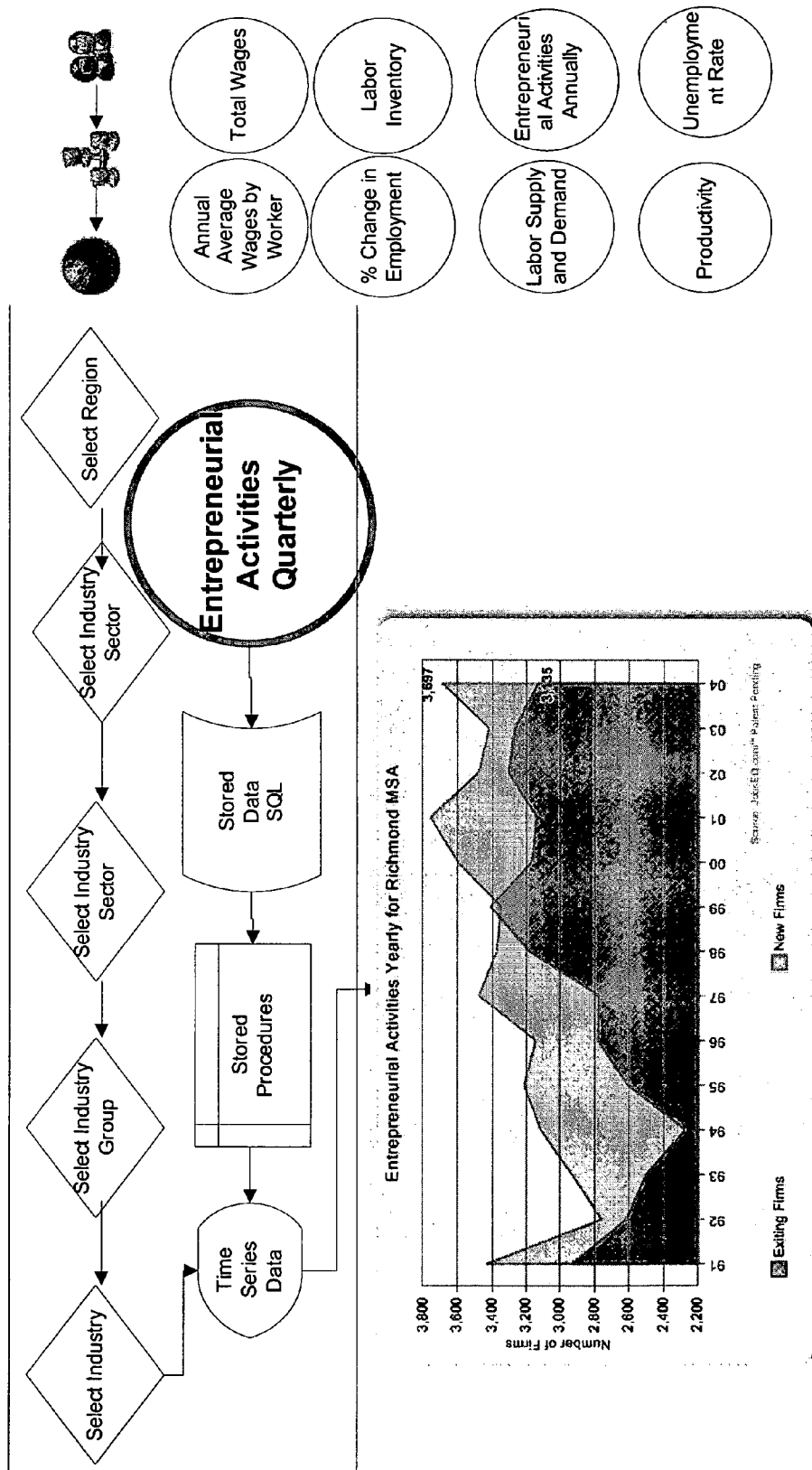


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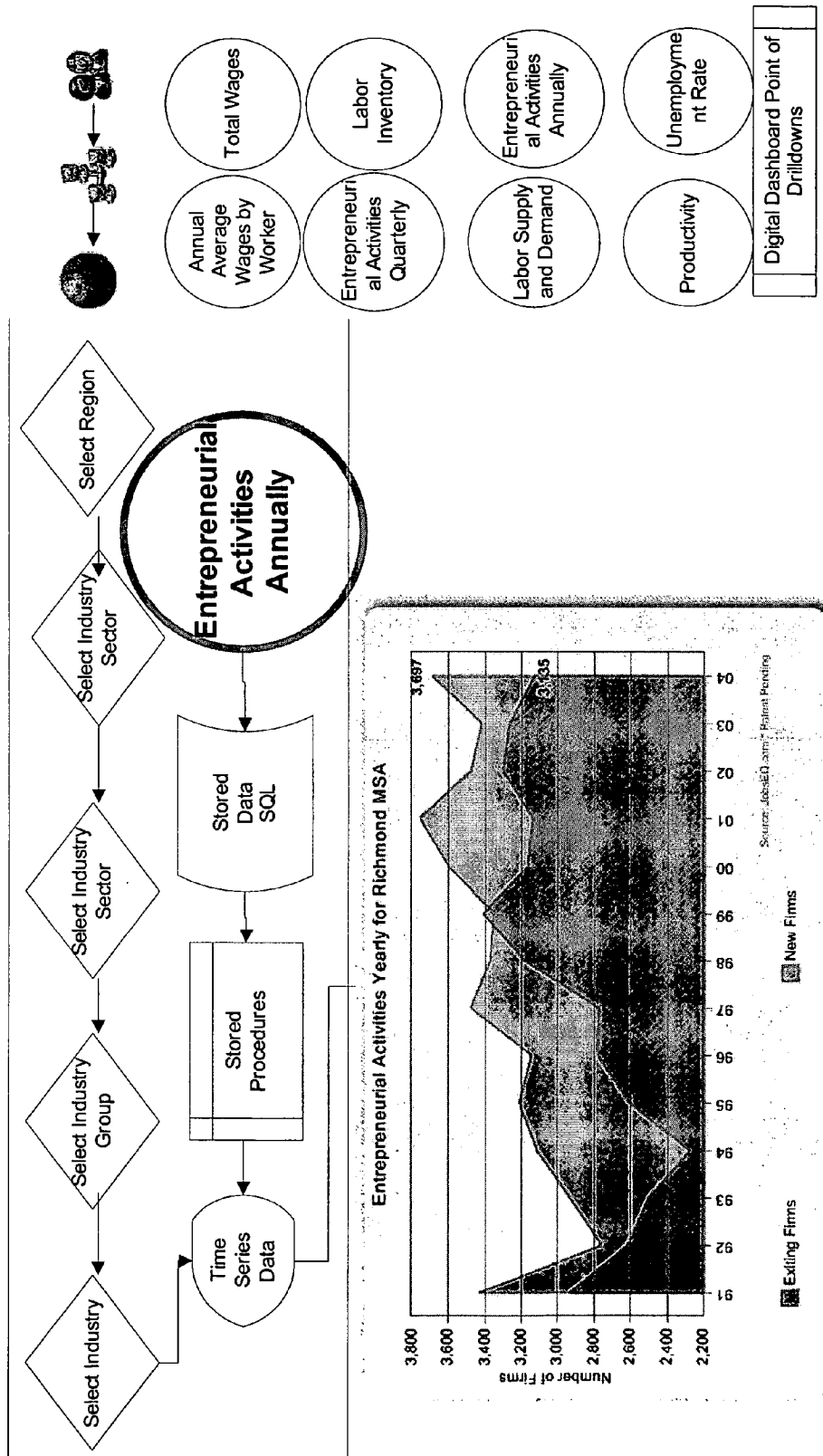


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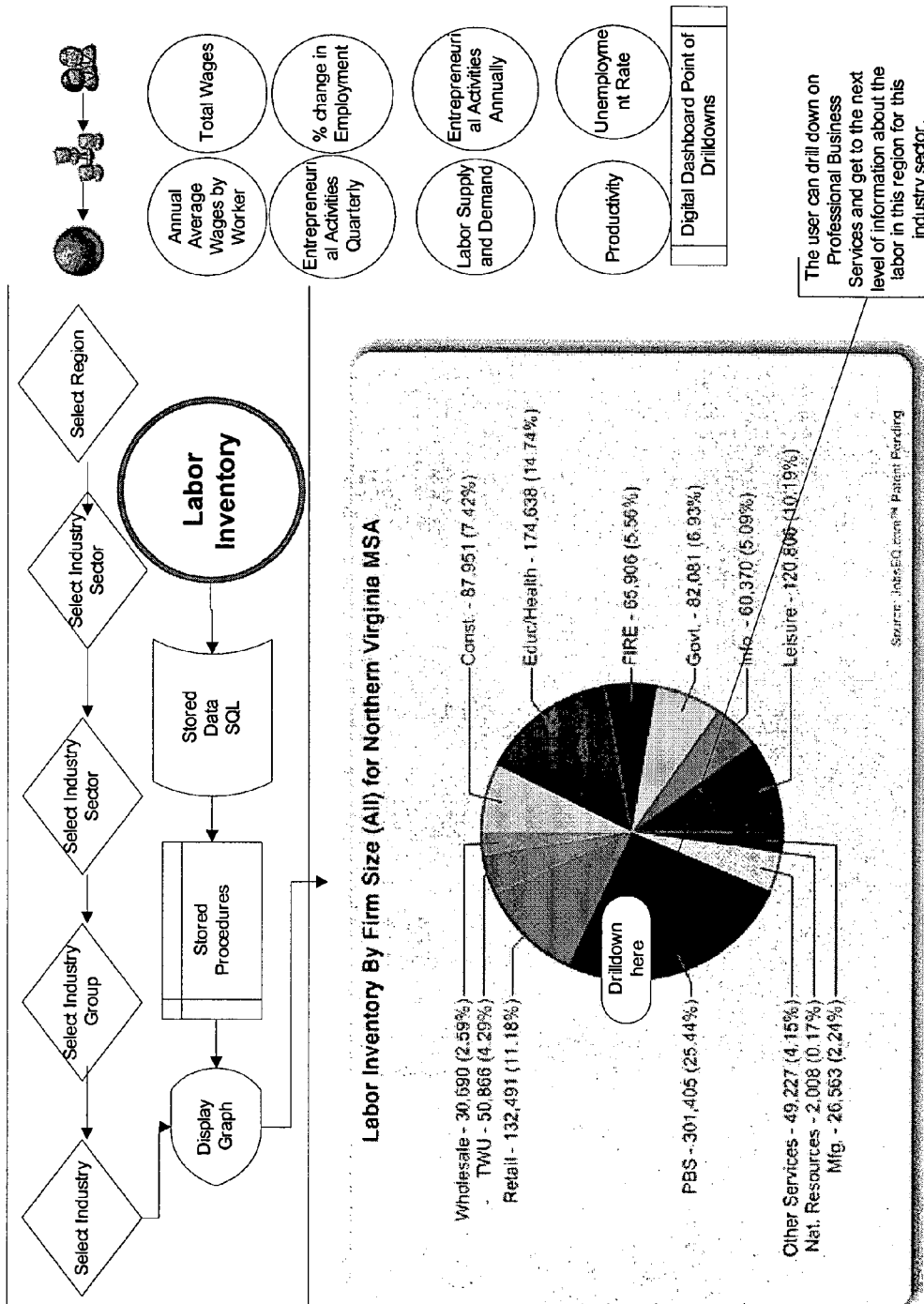


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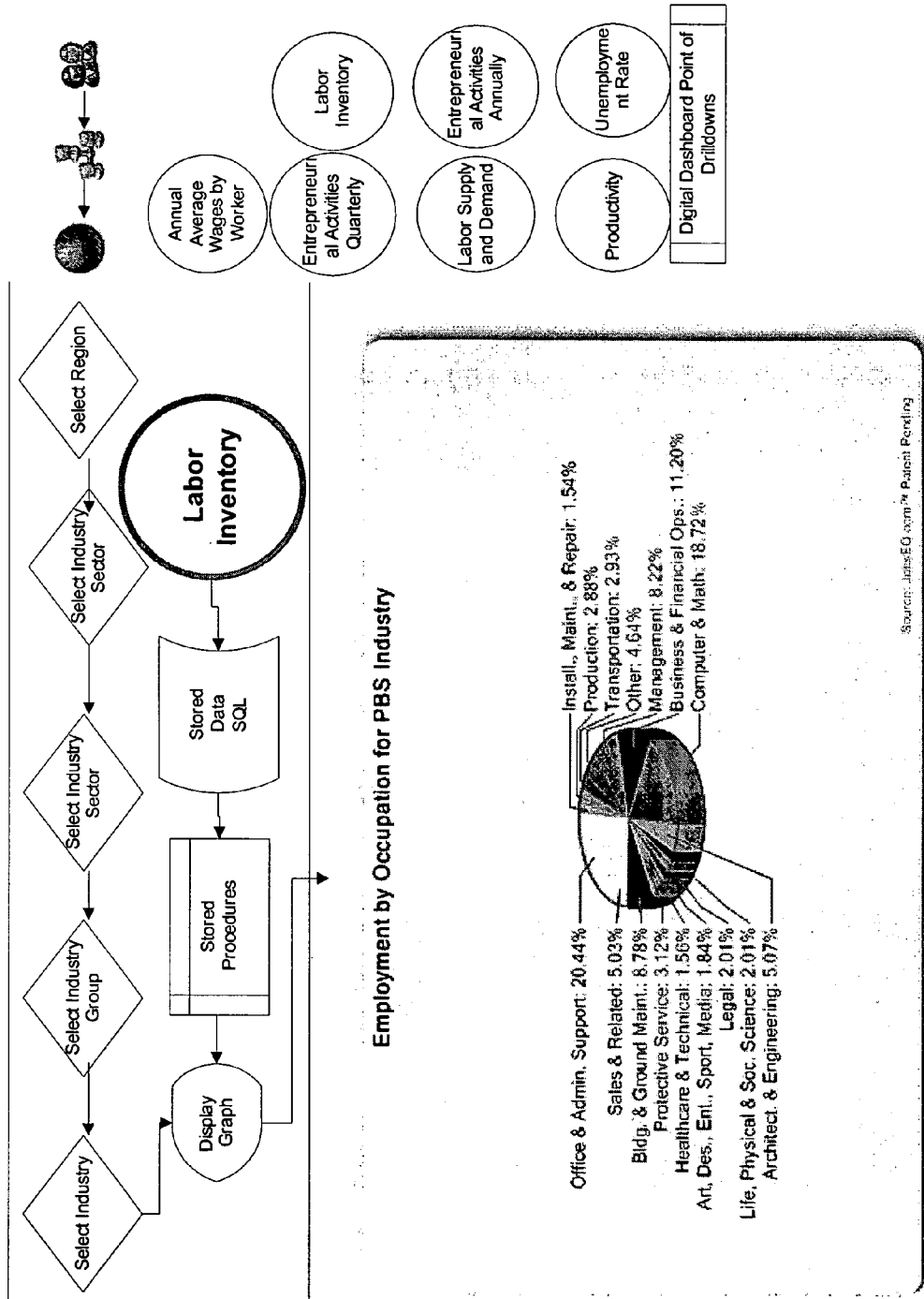


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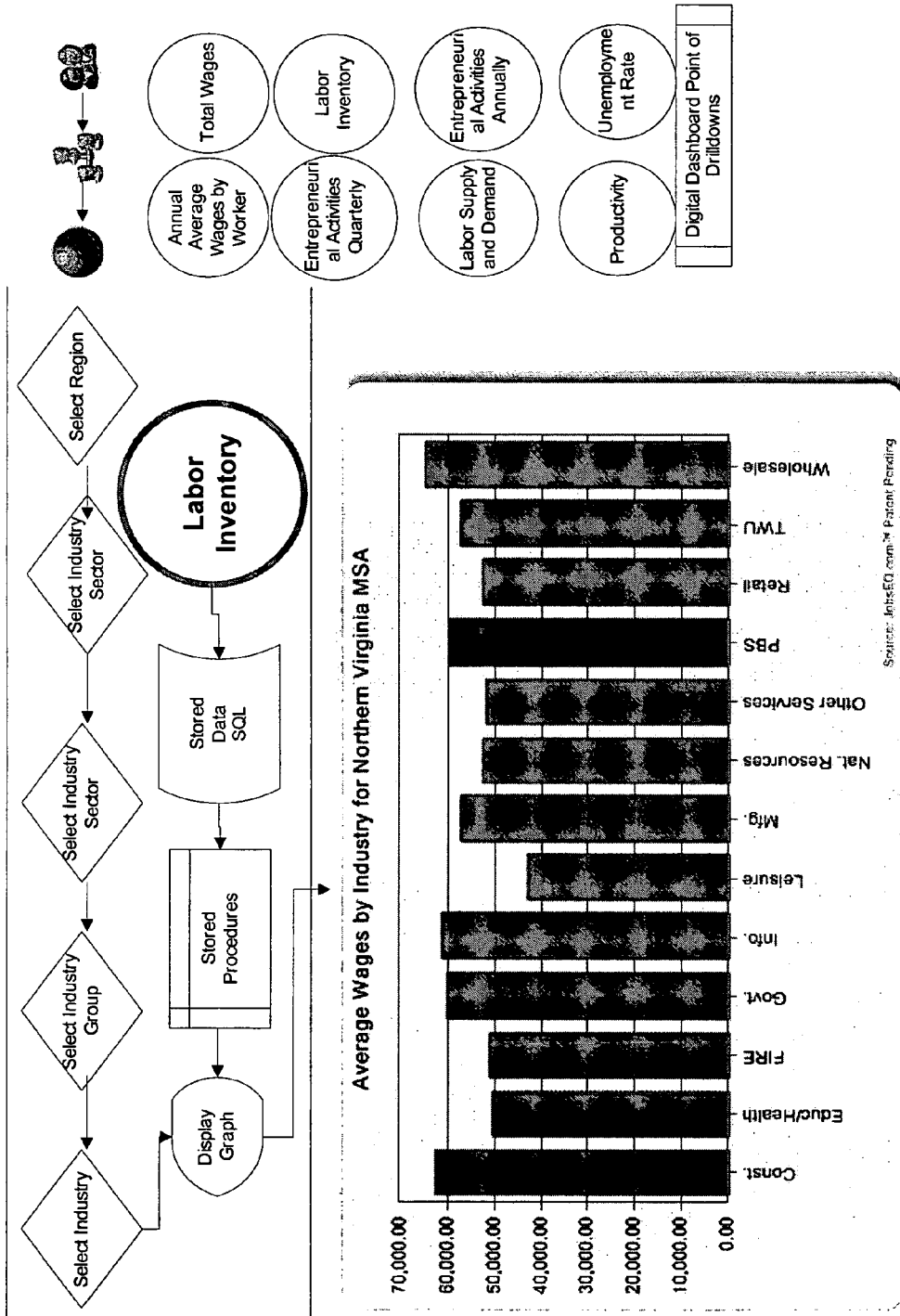


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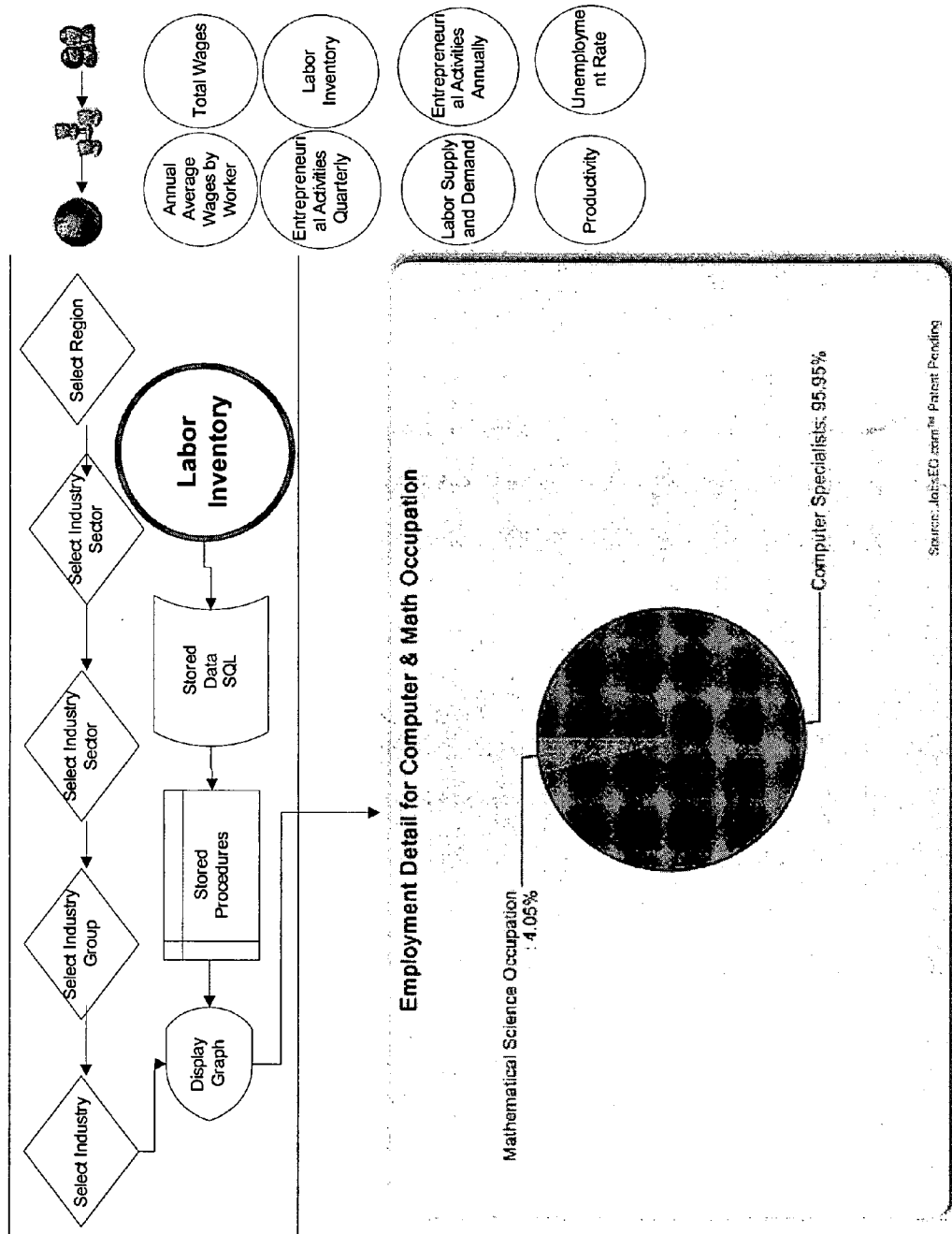


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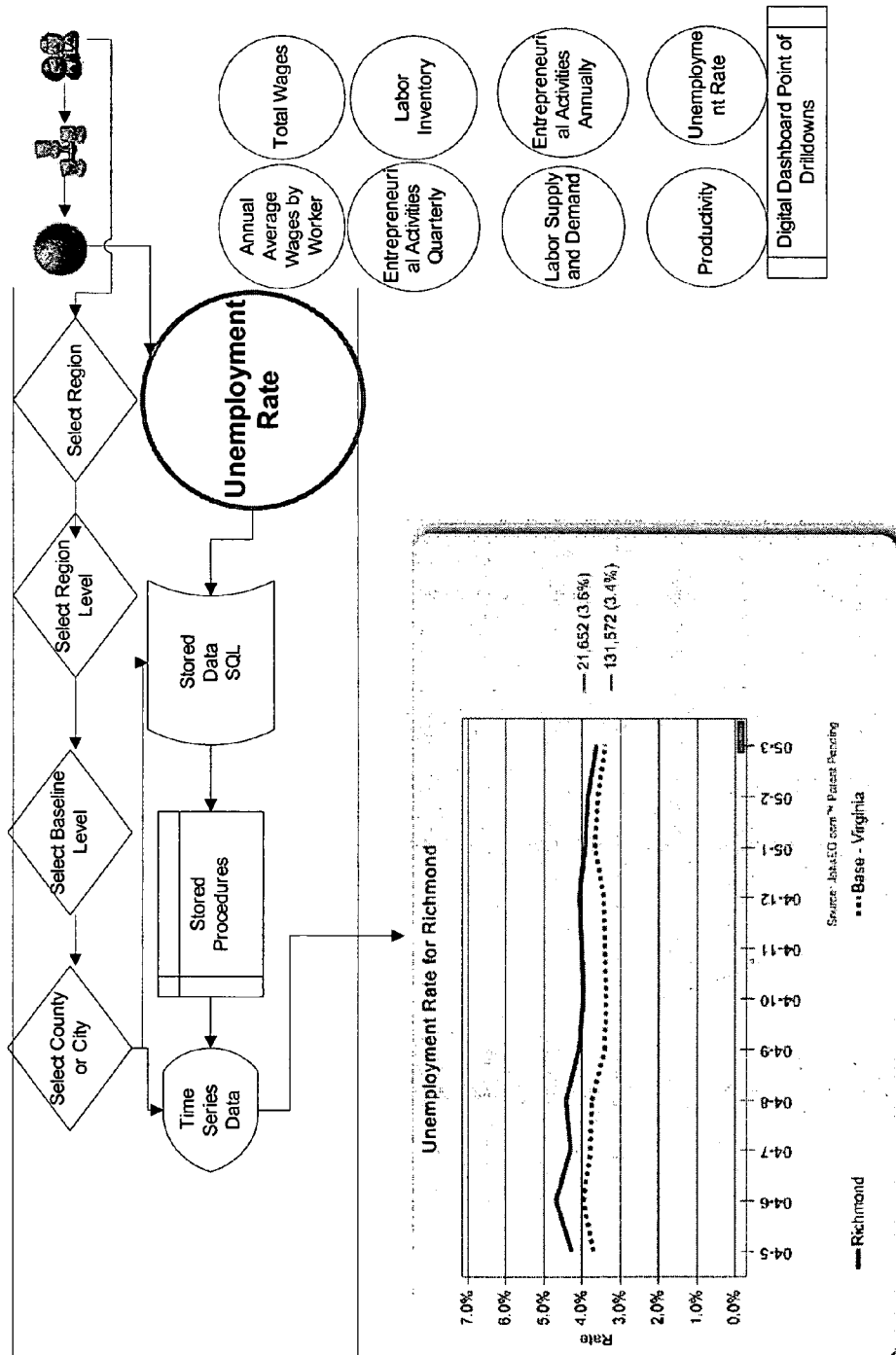


Figure 23

Percentage Change in Employment From Last Year



More than -6.00%
Between -6.00 and -3.01%
Between -3.00 and 0%
Between 0 and 3.00%
Between 3.01 and 6.00%
More than 6.00%

Source: jobsEO.com ®

EmplChange	Salem City	Scott County	Shenandoah County	Smyth County	Southampton County	Spotsylvania County
	-4.12	5.13	3.65	5.53	2.32	1.16

Figure 24

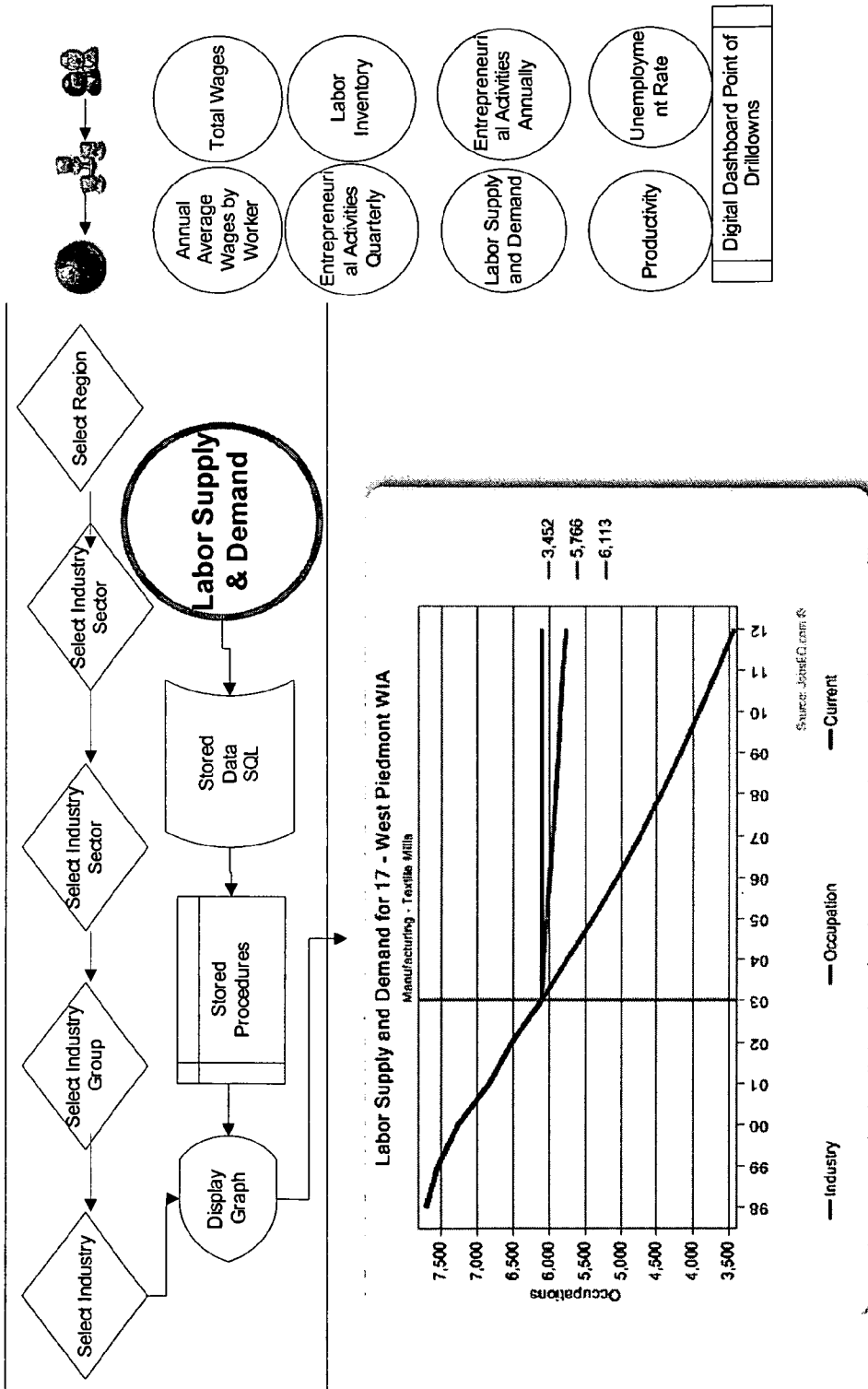


Figure 25

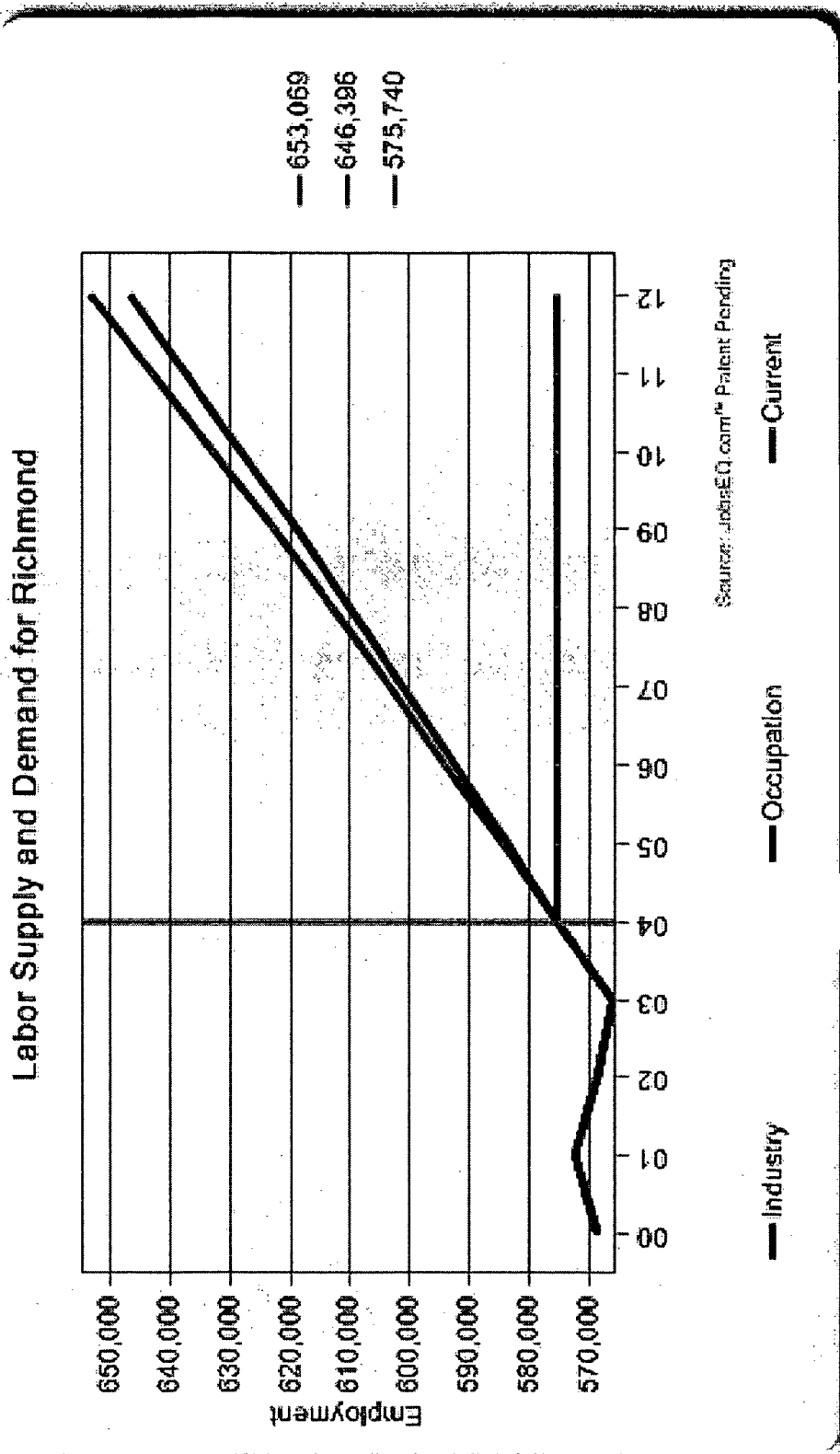


Figure 26

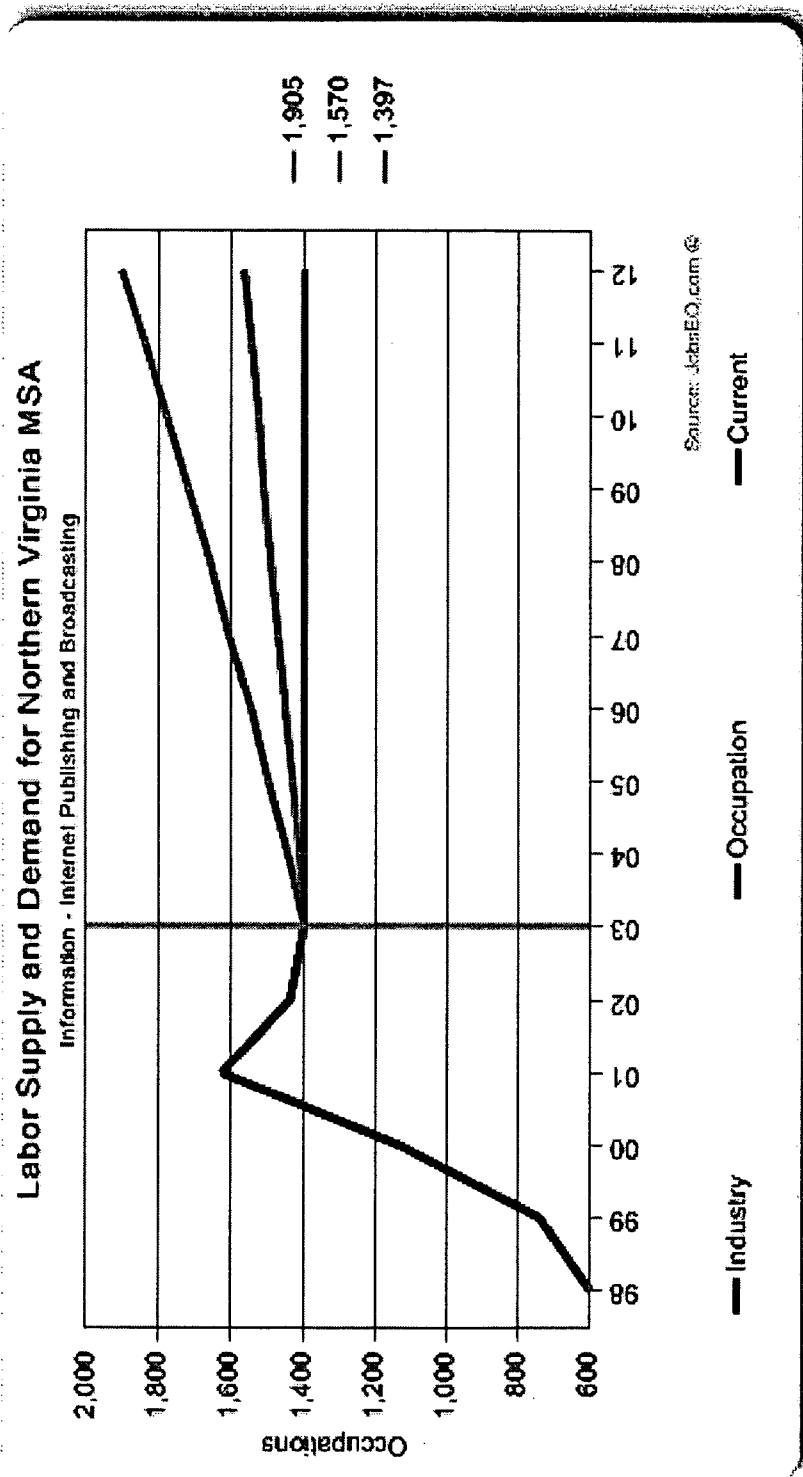


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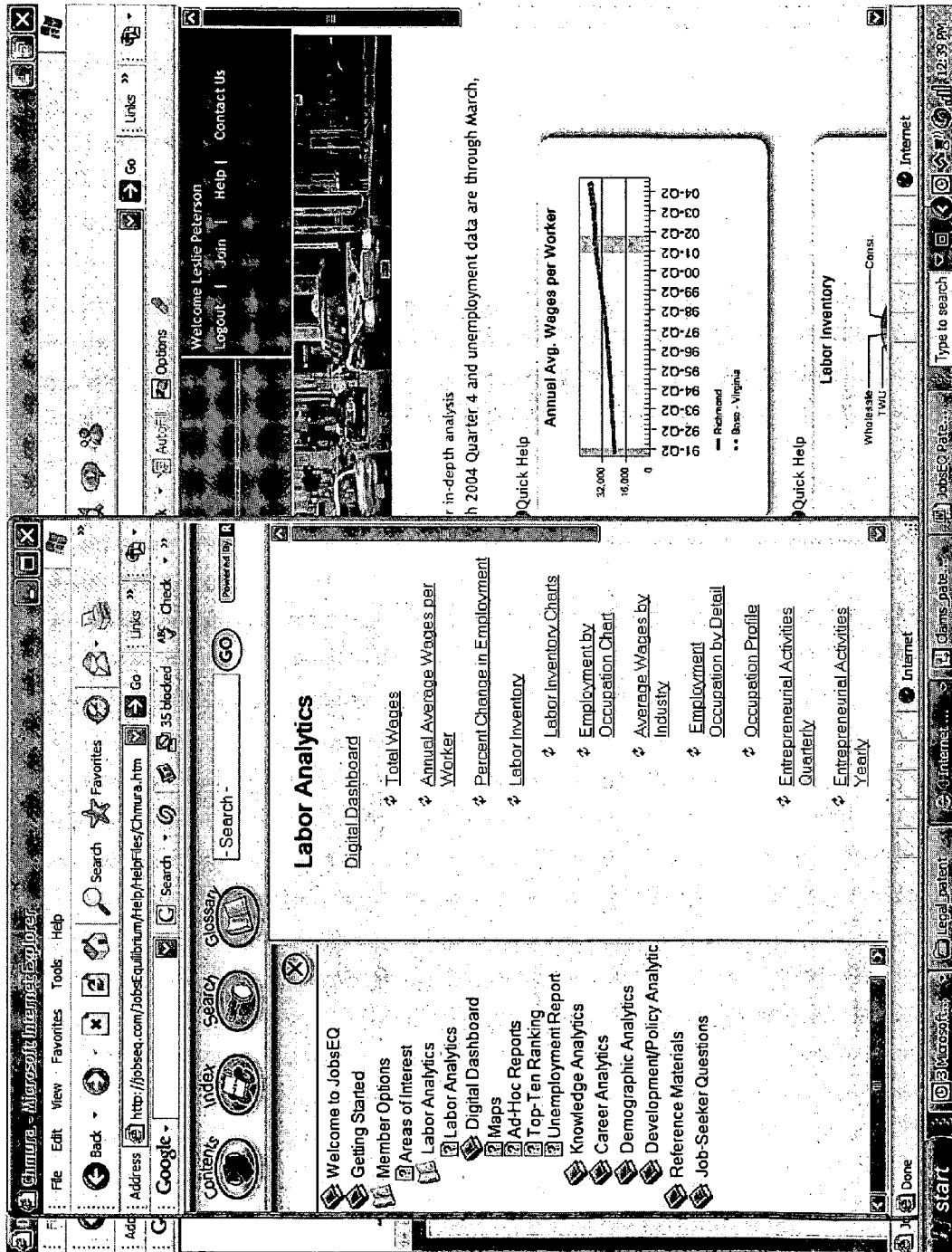


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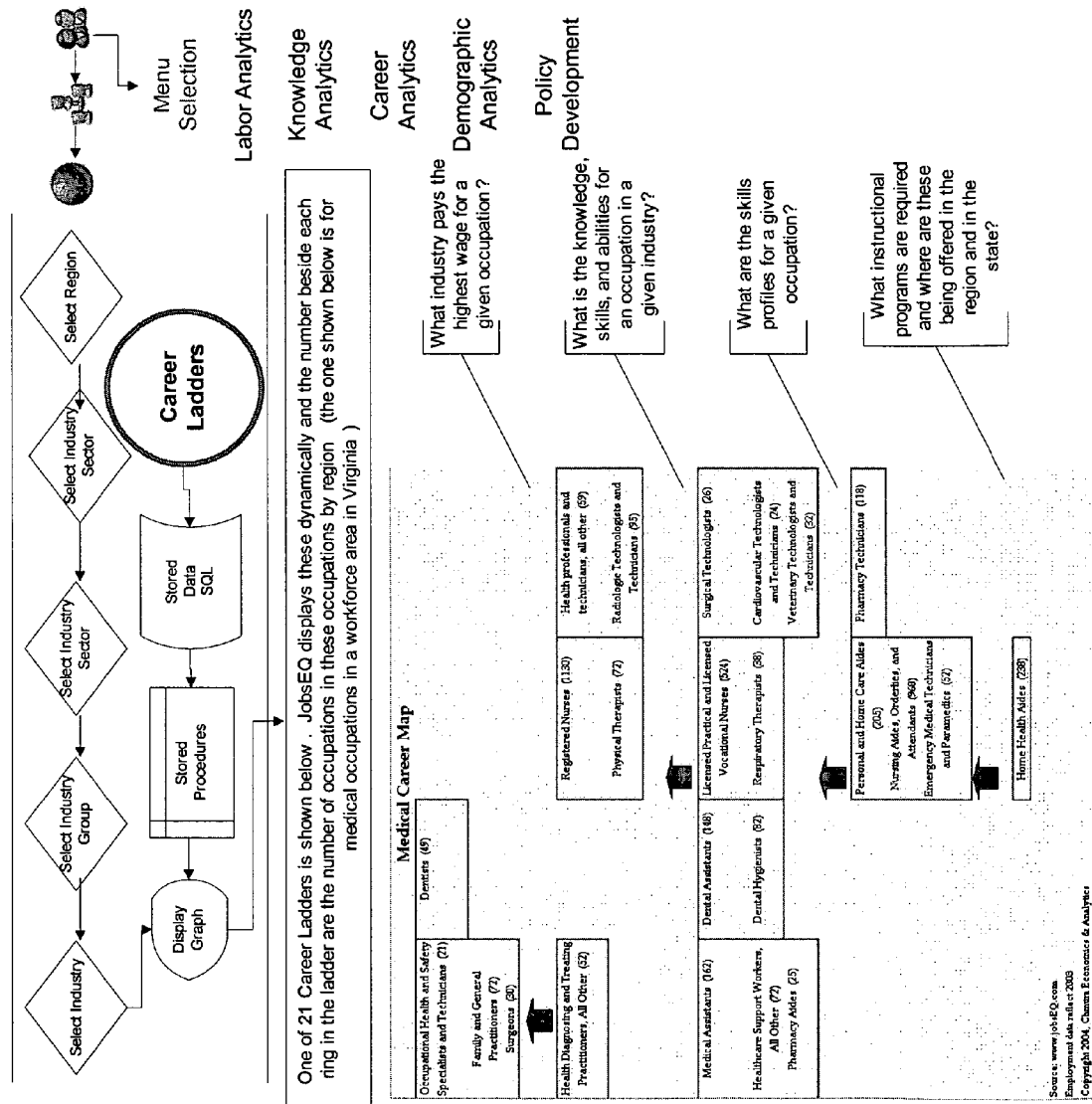


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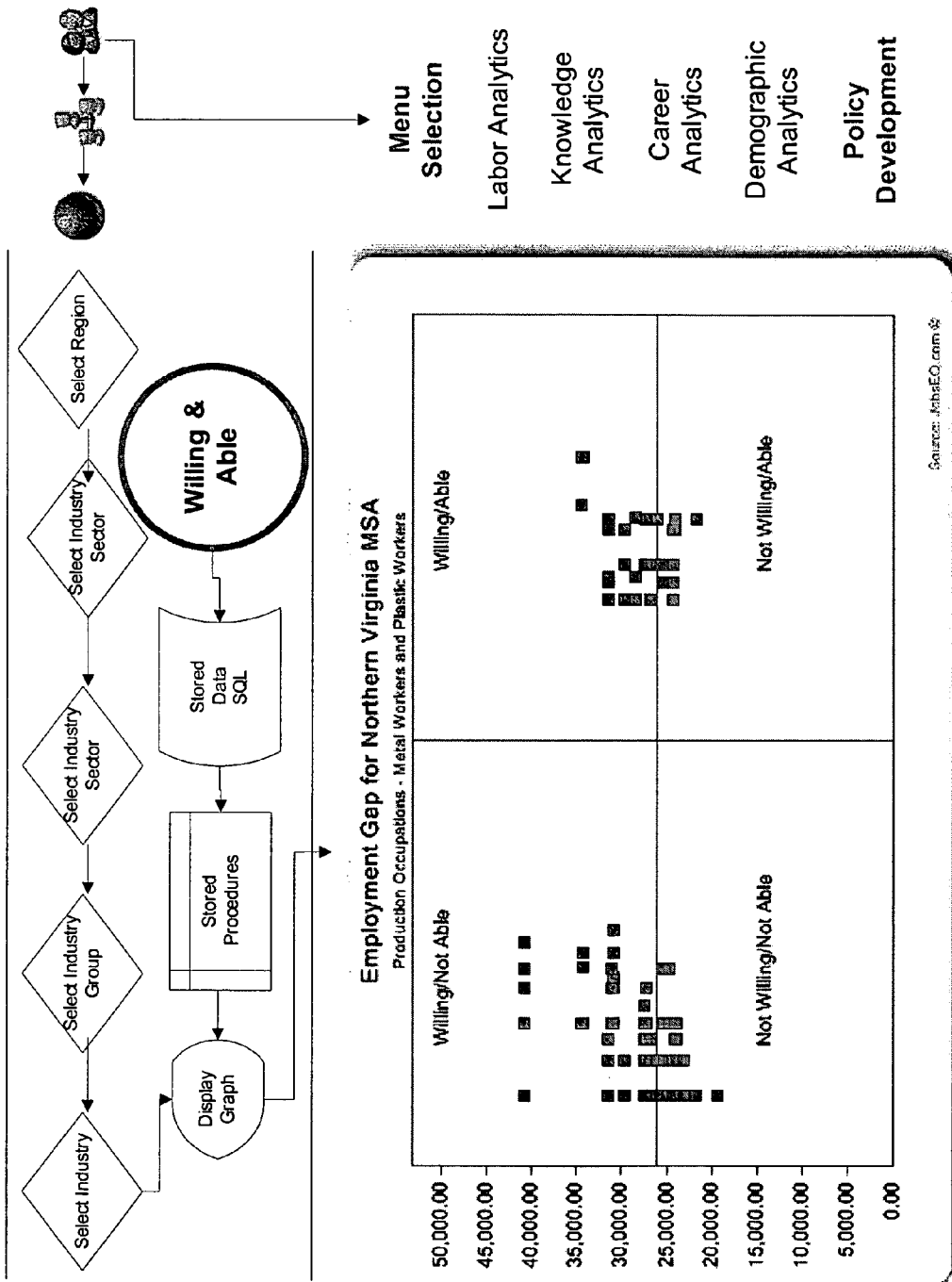
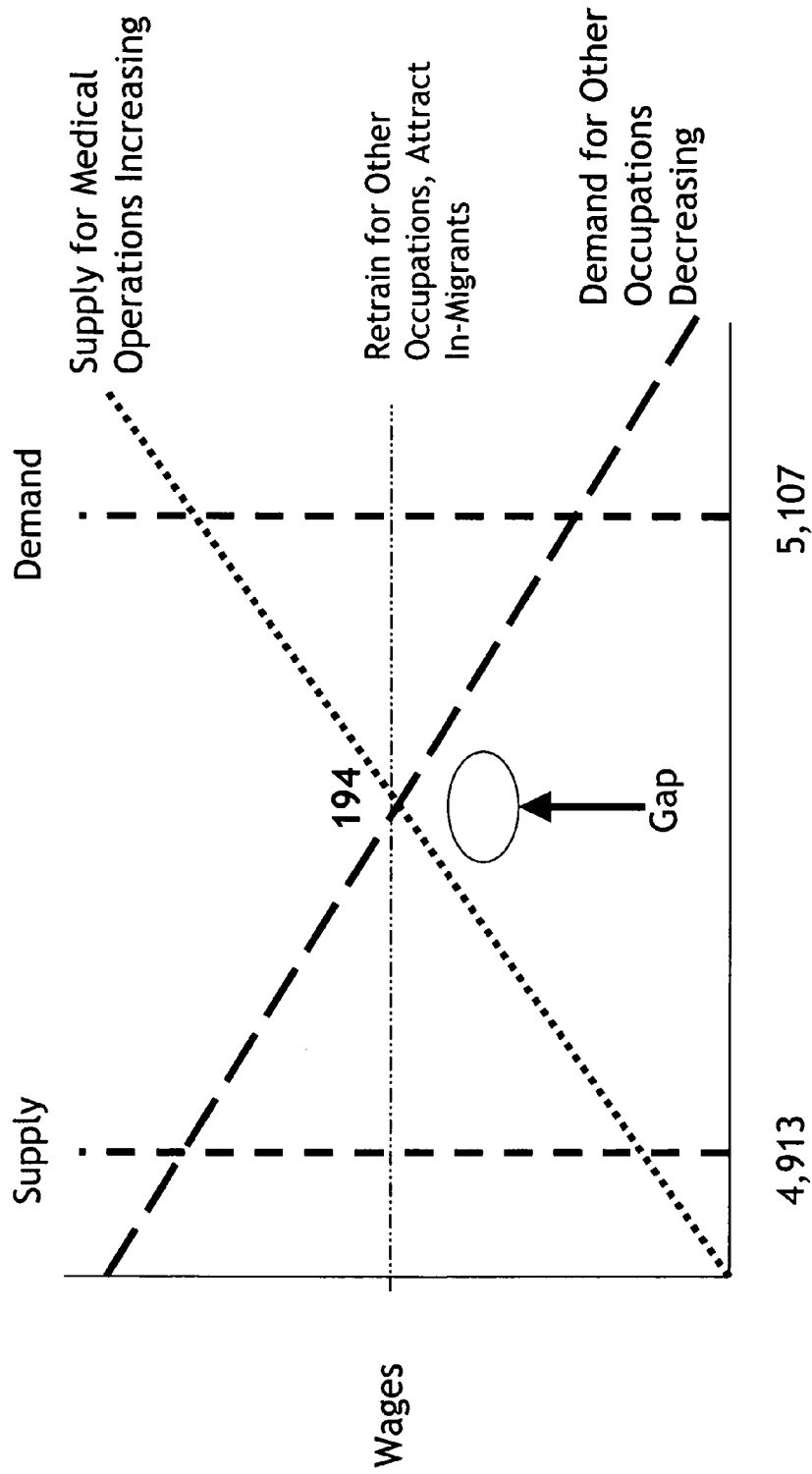


Figure 30



Employment in Medicine/Dentistry, 2007

Workforce Investment Area 1

Figure 31

West Piedmont WIA - Occupations with the Largest Forecasted Growth and Decline in WIA 17, 2002-2012 .

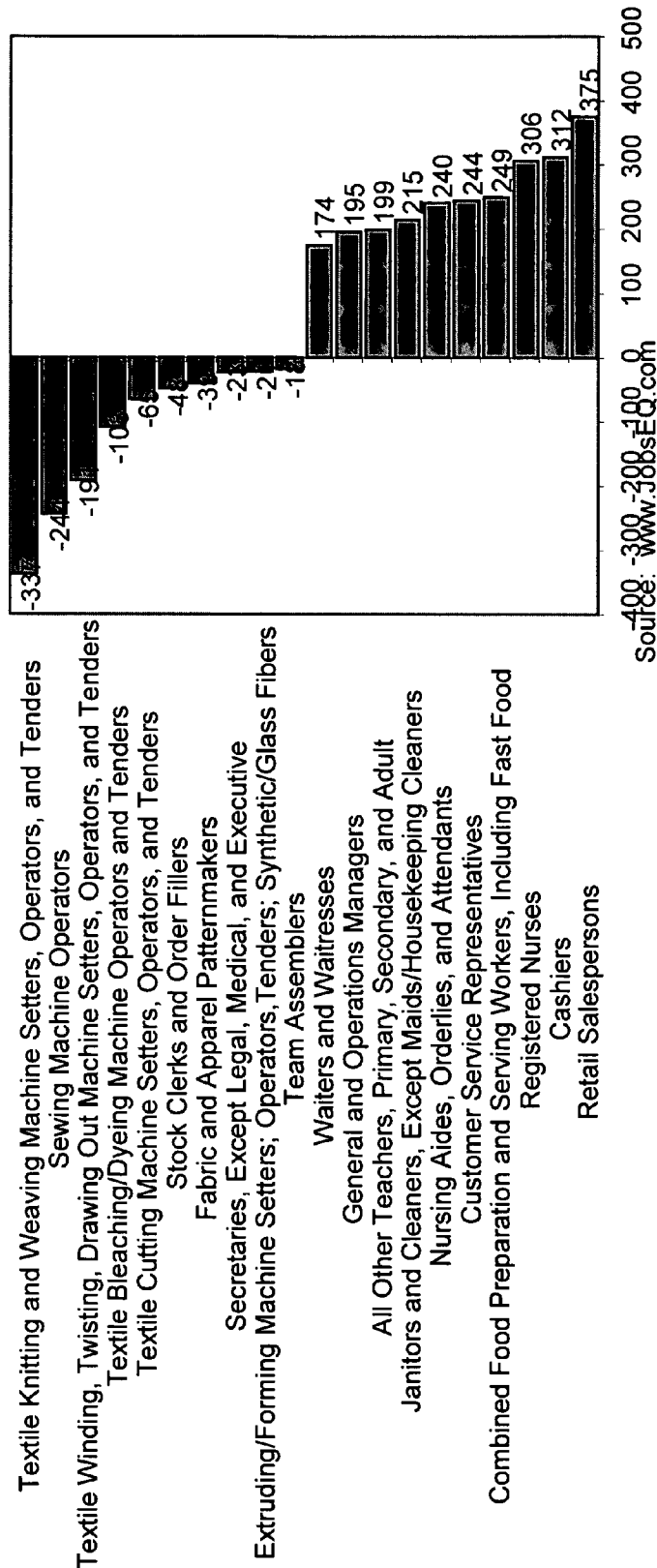
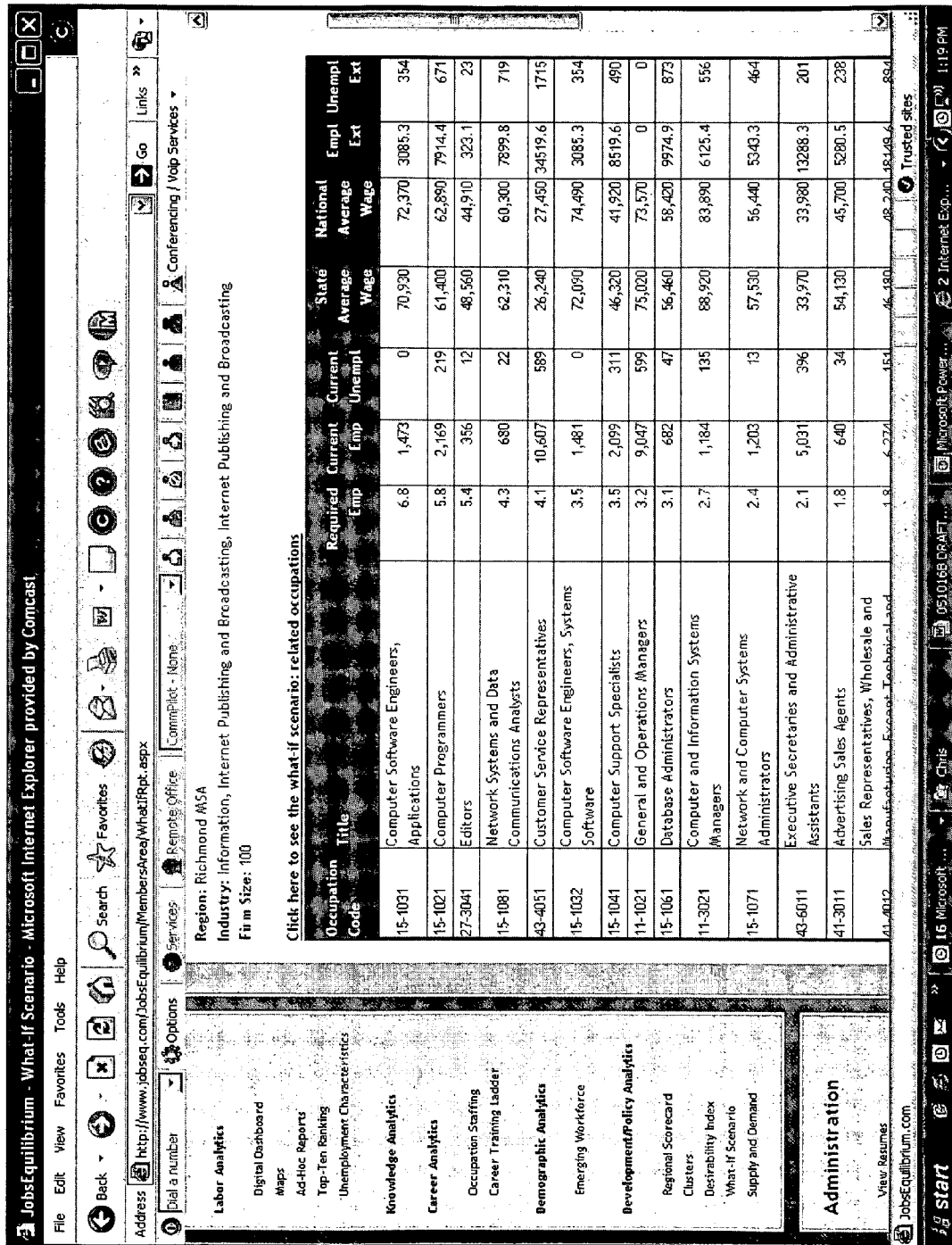


Figure 32



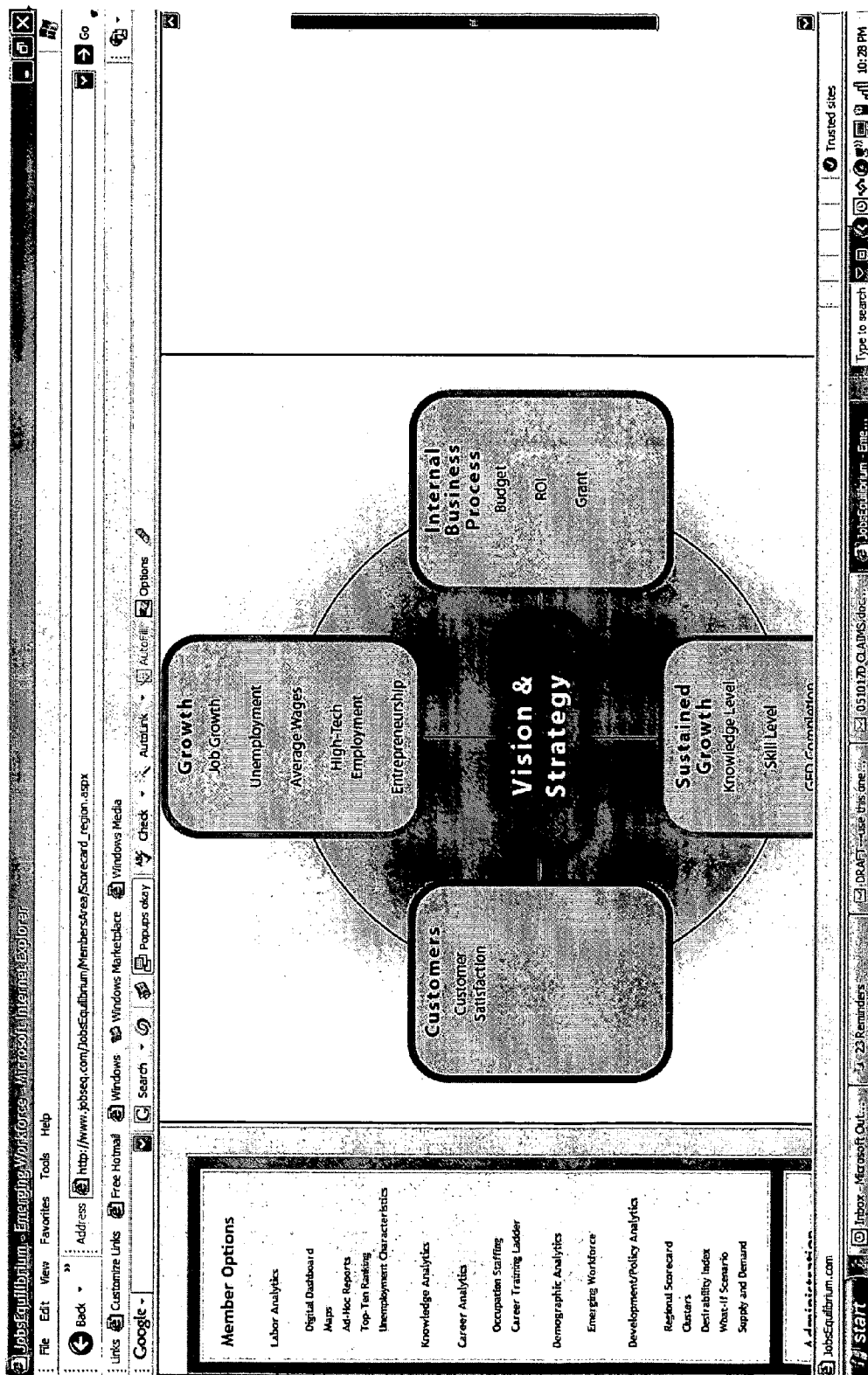


Figure 34

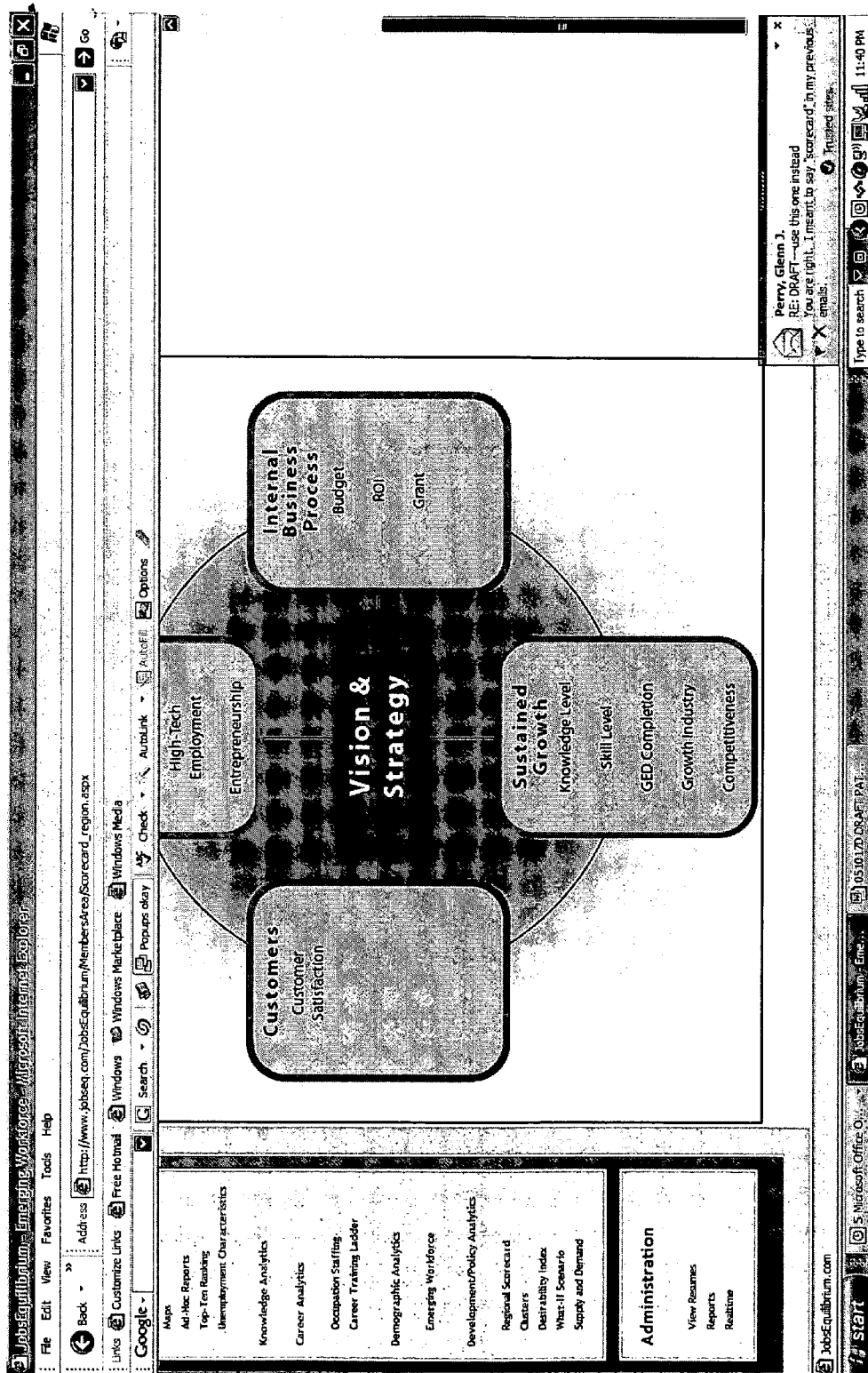


Figure 35

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SYSTEM AND METHOD FOR MANAGING ECONOMIC DEVELOPMENT, WORKFORCE DEVELOPMENT AND EDUCATION INFORMATION

RELATED APPLICATION

This application claims the benefit of priority for U.S. Provisional Application 60/619,861 entitled SYSTEM AND METHOD FOR MANAGING ECONOMIC DEVELOPMENT INFORMATION filed Oct. 18, 2004. This application also hereby incorporates by reference all subject matter set forth in U.S. Provisional Application 60/619,861.

BACKGROUND AND SUMMARY

In a dynamic economy, the fortunes of industries adjust because of changes in preferences, technology, international trade, and government regulations. As industries change, demand for occupations and skills adjust as does the need for various training and instructional programs. Accordingly, an information system is needed to help economic and workforce developers, policymakers, educators, incumbent workers, jobseekers, and students assess alternative paths that take into account the expected need for occupations and skills.

The systems and methods described herein provide a comprehensive arrangement for gathering raw data such as economic development and workforce development information including historical and forecasted economic data, organizing that data in a database in a manner in which it can be usefully mined, analyzing the data with a plurality of user selectable analytical tools and presenting mined and organized data to an end user in a way that answers a user's inquiry via a web-based interface. Inventions described herein relate to the manner of gathering the data, the manner of organizing it, the manner of mining that data, the tools that can be selected and utilized by the end user and the overall manner of providing these data in a convenient web accessible manner.

In the past, some of this type of information has been obtained from various government documents and websites. However, the process of collecting and linking the data to make it useful has been cumbersome and often required strong analytical skills. Consequently, information seekers either ignored the information or did not ascertain the full implication of the available information. In this environment, analysts were forced to spend hours collecting, manipulating, and analyzing the disparate sources of data. By the time all necessary data were collected, adjusted, and analyzed, the information often became outdated, sometimes leading to incorrect decisions.

In order to provide a system for better-decision making for economic and workforce developers, policymakers, educators, incumbent workers, jobseekers and students, there is now provided a web-based information system including decision support to assist users in considering alternative decision paths. Such alternative decision paths include, for example, whether to offer or take secretarial training in light of expected growth rates and future job opportunities in a local economy. The inventions are collectively referred to as a "system" throughout this document. The system described herein is implemented using a relational database and graphical user interface that allows a user to query the database to mine the appropriate information addressing a question and then report the mined information in the form of reports, charts, tables, and maps. Dynamic decision support (e.g., as to whether or not to offer certain courses at an educational institution or to attract particular industries to a region) pro-

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vides information and recommendations to decision makers, tailored to the geographic region, industry, and/or occupation required by the user.

The use of the claimed system allows a user to increase productivity and leads to better decision making. Users are able to quickly select and utilize analytic tools that provide answers to questions that formerly took days or weeks, even months to compile. Also, help tools are provided to guide the user with information and guidelines for interpreting and using data mined from the database.

Economic development, workforce development and education key information outputs, such as historical and forecasted economic data regarding economic variables including but not limited to jobs, unemployment, wages, and/or productivity, etc., and/or any changes therein are stored in a database. The presently preferred database is an SQL database. Access to the data stored in the database are provided via a web portal running on a data server coupled to the Internet. Users access the data using a web browser client. Data stored in the database are updated from time to time, such as, for example, monthly and/or quarterly. User tools are provided for assembling and processing the data in ways meaningful to the user.

The user tools allow the historical and/or forecasted economic data to be provided in various forms useful to the end user including, for example, charted and/or rendered forms. The economic data can be correlated to a user-selected economic variable and/or any of a wide variety of user-selectable parameters, such as:

- region (e.g., state, metropolitan statistical area (MSA), planning district commission (PDC), workforce investment area (WIA), county, and/or city, etc.);
- industry (e.g., 2- through 5-digit standard industrial classification (SIC) and/or North American Industry classification system (NAICS), and/or uncoded industry, etc.);
- employer characteristic (e.g., size, legal structure, headquarters location, historical behavior (e.g., rapid growth, local growth, quality of growth, prone to layoffs, etc.), etc.);
- occupation (e.g., standard occupational code (SOC), etc.); and/or
- worker attribute (e.g., credential, knowledge, experience, skill, and/or ability, etc.);
- demographics (e.g., age, gender, education, etc.); etc.

Historical and/or forecasted economic variables include, for example, jobs, occupations, and/or attributes. These historical and/or forecasted economic variables can comprise statements and/or estimates of supply and/or demand, which can utilize and/or integrate any of numerous potential factors. For example, historical and/or forecasted economic variables such as wages, jobs, occupations, worker attributes, employment, and/or unemployment, etc. They can relate to, be determined from, and/or comprise absolute values and/or changes, events, emergences, growths, declines, shifts, trends, and/or patterns relating to factors such as:

- macro-economics (e.g., gross domestic product (GDP), per-capita income, prices, inflation, interest rates, exchange rates, balance of trade, government spending, etc.);
- population;
- demographics;
- consumer spending;
- travel and/or tourism;
- technology (from the broadest to the narrowest sense of the term);
- number of employed;

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type of employed (e.g., full-time, part-time, hourly, salary, etc.);
 number of unemployed;
 type of unemployed (e.g., underemployed and/or actively seeking, etc.);
 emerging workforce (e.g., arising from academic and/or other training, entry- and/or lower-level positions, horizontally transitioning, in-migration, etc.);
 fading workforce (e.g., retiring, expiring, transitioning away (vertically and/or horizontally), out-migration, etc.); and/or
 personal characteristics (e.g., education, sex, and/or age, etc.); etc.

Using government-provided data for occupation-related worker attributes, occupations can be automatically mapped into occupation groups using data mining and mapping tools incorporating algorithms. Within each occupation group, training ladders can be generated, the training ladders indicating what worker attributes are needed and/or desired to obtain and/or maintain each occupation, to move from one "rung" to another in a "vertical" progression in a career, and/or to "horizontally" change occupations and/or careers, etc.

A user-selected worker attribute, from among many available worker attributes, can be mapped to degrees, certificates, courses, trainings (including training that is on-the-job, hands-on, and/or experiential, etc.), and/or salaries by industry etc., that are suggested and/or required to obtain and/or maintain that selected worker attribute. This mapping can extend to post-academic, post-graduate, graduate, undergraduate, associate, military, technical, vocation, high school, pre-high school, and/or other degrees, certificates, courses, and/or trainings.

This mapping can be general and/or specific. For example, one or more particular courses of study can be mapped to specific regional academic institutions offering each course, the times the course is offered, the capacity of the course, admission and/or registration procedures, the cost of the course, the availability of and/or requirements for financial aid, textbooks and/or other materials required and/or suggested, etc. Similar mapping can be provided for off-campus coursework, such as on-line and/or correspondence courses. Conversely, such mapping can forecast the demand and/or need to provide various degrees, certificates, courses, and/or trainings, etc.

For any user-selected parameter, performance related to any relevant economic criteria can be determined, measured, estimated, rendered, and/or tracked. Likewise, objectives, goals, and/or plans related to any user-selected economic criteria can be selected, entered, measured, and/or tracked at any desired time and/or frequency. Notifications can be provided if performance deviates by a user-determined value from a goal, average, and/or norm, etc. Examples of economic criteria can include:

- entrepreneurial activities;
- productivity;
- wealth creation;
- employer retention;
- knowledge base and/or workers;
- economic diversity;
- utilization of community assets (e.g., academic and/or training resources, such as institutions, facilities, and/or personnel; programs; services, etc.); and/or
- commuting patterns; etc.

Thus, for example, for a given region, a goal related to entrepreneurial activities can be set and performance against that goal by the region can be tracked and/or reported in the

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balanced scorecard. A notification can be provided, such as via an e-mail message to a predetermined individual, if for example, quarterly performance exceeds the goal by more than 5 percent, and/or falls below the goal by more than 3 percent.

For any user-selected parameter, leading and/or lagging indicators can be used to determine performance related to any relevant economic variable and/or criteria. For example, with respect to knowledge base, knowledge workers, worker credentials, and/or worker skill level, a leading indicator such as high school drop-out rates, and/or a lagging indicator such as general educational development (GED) award rates, can be utilized.

For any user-selected region, a desirability index can be generated and/or rendered, the index providing an indication of the desirability of attracting and/or retaining one or more user-selected and/or known industries, employers, and/or occupations, etc. The index can be based on knowledge and/or estimates regarding factors related to each industry, employer, and/or occupation, etc., such as whether it pays above-market wages, whether it is likely to grow, whether it is likely to hire locally, and/or whether it provides worker training, etc. The factors can be filtered, adjusted, and/or weighted as desired.

The database contains a critical mass of workforce and economic development data (refreshed and supplemented regularly), the building blocks to wealth, to users at every level of economic development, workforce development, education reform, partnership consulting, human resources, corporate operations, and so forth. The interactive web-based system described herein provides capabilities that include regional specific economic indicators like employment trends, regional wealth, productivity of a region's workforce, entrepreneurial activities, high-technology trends, and forecasts for occupations and industries for every metropolitan statistical area, planning district commission, workforce area, county and city in a state.

Using the system a user can obtain specialty information by ad-hoc query about the economic trends for the users region in the state. It removes traditional barriers between workforce and economic development analysis by aggregating and mining data for each user to understand the dynamic relationship of key economic indicators on current and future industry and occupation trends unique to their region. Brick and mortar economies undergo chum and the new economy emerges seeking a knowledgeable savvy labor market. The system matches trained workers to available jobs and allows workforce development officials to underpin economic development strategies by providing an inventory of workers who are:

- Employed
- Unemployed
- Underemployed
- Emerging

The system delivers secure, responsive, high-quality, customer-oriented services and support fostering a productive web-enabled database capable of mining key economic and workforce development indicators. Analyzed and organized data from the system can be used as building blocks for engineering a vibrant regional workforce aligned to the strategic goals of the economic development communities. The system is easily and rapidly accessed via a web interface and provides seamless data mining of critical analytics that result in a reliable information coordination environment between workforce development officials, economic development practitioners, education reformers, high-technology industries and occupations, and job seekers.

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User selectable analytical tools tie together high-quality government and CEA data along with help tutorials to identify and select alternative actions for a region.

Economic Development officials can benefit from using the system. Economic Development agencies can make informed decisions about their regions industry capabilities that include the knowledge and skills attributes of the local workforce. Among the user tools provided, the system includes the following dashboard analytics (vital economic statistics) for the economic developer end user:

Labor Market and Industry Demand Forecasts by Occupation

Entrepreneurial Activities

Labor Market Inventory

Employment and Unemployment trends

The user, via a standard web browser and Internet access, is presented with a “dashboard” of choices from which he can mine data from the SQL database and apply analytical tools. The user can use this dashboard presentation to drilldown to specific data related to questions at hand and obtain more detailed information about a region’s economic and workforce metrics. Gaps for skills shortages allow workforce agencies to develop regional training strategies for retooling the local labor market based on the economic development regional and local strategies for the regions. Labor and industry demands offer a roadmap for strategic initiative planning and resource allocation based on the best fit industry to workforce alignments.

The system is useful for Workforce Development officials. Workforce Development (WD) officials supply Economic Development (ED) and Education (EDU) reform process owners with current data about the attributes of the local workforce. The system provides a web-based, interactive method to track a region’s changing workforce performance relative to a baseline and goals over time. WD can provide ED with the following important statistics about a region’s workforce today and discuss strategies for future workforce initiatives to meet the needs of potential firms desiring to locate in the WD and ED region:

Employed

Unemployed

Underemployed

Emerging

The system can serve as a useful tool in recruiting new firms and employees to a geographical region. It provides information about the current and future economy for the region as it relates to the supply of workers and the demand for workers based on industry needs. Identification of supply and demand results in the occupational and instructional program gap metrics as well as current and projected inventories of occupations and skills.

It has been nearly impossible to find the caliber of data required for understanding the workforce capabilities for all communities in a given state. It is a daunting task for economic development folks to find as complete a source of quality, up-to-date, and objective data that they can use to benchmark their community against any other in the state. The system includes complex analytical tools that calculate the aggregate skills, knowledge and abilities of the region’s workforce and compare these profiles to the current and future demands for these attributes by industry and labor market demands using CEA proprietary technology.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic diagram providing an overview of the inventions.

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FIG. 2 is a schematic diagram showing that data from various sources are gathered and, after processing, stored in database 112.

FIG. 3 is a flow chart explaining how data from data sources 120 are manipulated and stored into database 112.

FIG. 4 is a schematic diagram explaining the structure of database 112.

FIG. 5 is a schematic diagram explaining CEA datamart database 134 (see FIG. 3)

FIG. 6 is a diagram of a login screen of the “JobsEQ™ web pages which provides a vehicle for delivering data from database 112 to a web-based end user.

FIG. 7 is a diagram showing a post login main menu of the “JobsEQ™” web pages.

FIGS. 8, 9 and 10 are screenshots of the upper, middle and lower portions (when scrolling) of a “Digital Dashboard” from which a user can navigate the JobsEQ™ web pages after login.

FIG. 11 is a flowchart showing the general process flow explaining how data are extracted from the database, manipulated and delivered to an end user.

FIG. 12 is a schematic diagram showing an example of how a user obtains information related to “Total Wages”.

FIG. 13 is a screenshot of the “Total Wages” screen to which a user is taken after clicking on the “Total Wages” chart on the “Digital Dashboard” shown in FIGS. 8, 9 and 10.

FIG. 14 shows an example of how a user obtains information related to “Annual Average Wages Per Worker”. The region’s relative individual wealth creation can be analyzed by locale.

FIG. 15 shows an example of how a user can drill down to obtain cost of living information.

FIG. 16 shows an example of how a user obtains information reflecting the percentage change in employment.

FIG. 17 shows an example of how a user obtains information regarding quarterly entrepreneurial activity.

FIG. 18 shows an example of how a user obtains information regarding annual entrepreneurial activity.

FIG. 19 shows an example of how a user obtains information regarding labor inventory.

FIG. 20 shows an example of a first drill down for more detailed labor inventory data.

FIG. 21 shows an example of a second drill down for more detailed labor inventory data.

FIG. 22 shows an example of part two of a labor inventory data drilldown.

FIG. 23 shows an example of data retrieval related to the unemployment rate drilldown. These choices are represented by the flow chart blocks shown in the upper portion of the figure.

FIG. 24 illustrates the production of a map showing percentage change in employment from a year ago.

FIG. 25 illustrates the production of a chart showing labor and supply and demand. Menu choices from the web page are represented by the flow chart blocks shown in the upper portion of the figure.

FIG. 26 shows an example of a chart produced to demonstrate “Labor Supply and Demand for Richmond.”

FIG. 27 shows an example of a chart produced to demonstrate “Labor Supply and Demand for the Northern Virginia MSA”. Of course the geographical region used is merely exemplary.

FIG. 28 illustrates the on line help manual available to users.

FIG. 29 illustrates the production of “Career Training Ladders”.

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FIG. 30 is a schematic diagram illustrating the production of a "Willing and Able" chart. The Willing and Able tool allows the user to specify an occupation and to then examine related occupations for their appeal as career-change options.

FIG. 31 graphically represents a gap in employment in the medicine/dentistry field.

FIG. 32 is a graphical representation of occupations with the largest forecasted growth and decline in a particular region.

FIG. 33 is a schematic diagram illustrating a "What If" report. The 'What If Report' is identified on the 'development and policy' analytics under 'member options.'

FIGS. 34 and 35 are schematic diagrams (upper and low portions of screens, respectively) illustrating the balanced scorecard analytic which is part of the policy development category for JobsEQ™.

DETAILED DESCRIPTION

FIG. 1 is a schematic diagram providing an overview of the inventions. The information and decision support system according to the inventions is generally denoted by reference numeral 100. System 100 gathers raw data, such as economic statistics, from a various data sources, collectively denoted by reference numeral 120. Data from these various data sources 120 are manipulated by processes collected denoted by reference numeral 122 and ultimately stored in an SQL database 112 residing in a data base server 110. Database server 110 manages database 112 and serves data from database 112 to end users via a web server 102. In its presently preferred form, end users interact with system 100 via a collection of web pages collected known as "JobsEQ™", a trademark of Chmura Economics & Analytics, LLC (CEA). Web server 102 serves the various web pages of JobsEQ™ and data retrieved from database 112 to end users 140, 142 and 144 via the Internet 104. End users 140, 142 and 144 can access system 100 using a standard web browser, such as Internet Explorer, running on a computer such as computers 150, 152 and 154.

FIG. 2 is a schematic diagram showing that data from various sources are gathered and, after processing, stored in database 112. The figure shows twelve exemplary data sources. Particular data sources and types of data are design choices. There may be many more than twelve such data sources, or fewer. In the presently preferred arrangement of system 100, data are retrieved from the following sources:

- Statistics Canada
- State Departments of Education
- CEA Proprietary Data
- U.S. Census
- U.S. Bureau of Labor Statistics (BLS) Household Employment Survey
- BLS ES-202 Quarterly Census of Employment and Wages (QCEW)
- BLS ES-203 Characteristics of the Unemployed
- BLS O*NET
- National Center for Education Statistics
- U.S. Department of Defense
- BLS Occupational Employment Statistics (OES)
- Census Local Employment Dynamics (LED)
- American Chamber of Commerce Rating Association (ACCRA)

These data are received in various forms including, for example, flat files and other data configurations. Processes 122, shown generally in FIG. 1 and in greater detail in FIG. 3, include various algorithms and processes for converting the data from data sources 120, which may be in various disparate

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forms in their respective native formats, into formats of data appropriate to store into a plurality of tables in database 112.

FIG. 3 is a flow chart explaining how data from data sources 120 are manipulated and stored into database 112. These processes are collectively referred to by reference numeral 122. Raw data, collectively 120, are parsed at step 124 and stored in a CEA Raw Data Storage Database 126. It is presently preferred that raw data are processed one quarter at a time for convenience. Of course this is a matter of design choice. It happens to be convenient based on hardware currently selected and utilized. One quarter of the raw data are stored in a data storage location 128. At step 130 North American Industry Classification System (NAICS) crosswalk is applied. This crosswalk transforms the new data in the following three ways: 1) data with a Standard Industrial Classification code (the precursor to NAICS) but no NAICS is given the proper NAICS code; 2) NAICS codes that still possess codes under the NAICS 1997 system are given the proper NAICS 2002 code; and 3) NAICS with 'unknown' codes that have SIC codes are given the proper NAICS code. The data are then normalized at step 132. Normalized data are then stored in a CEA DataMart Database 134. At step 136, data are aggregated by year, quarter, industry and region. Non-disclosure rules are applied to the data at step 138. The thus processed data are then stored in database 112. Flow chart elements 128-138 are repeated for each quarter of the data so that all of the raw data are processed and stored into database 112.

Database 112 includes multiple tables (twenty two in the presently preferred embodiment). Data from the various data sources is gathered and reorganized into the tables of database 112. The organization of data in database 112 in part makes it possible for a user to obtain answers to various inquiries.

FIG. 4 is a schematic diagram explaining the structure of database 112. Database 112 includes multiple tables that are linked as shown in the FIG. 4. Each block in the figure represents a table. The upper portion of each table block shows one or more fields of data that are primary keys. Multiple primary keys are known in the database world as "compound keys." The lower portion of a table block shows the remaining fields of data that are not primary keys.

As shown in FIG. 4, there are twenty two (22) tables in database 112 as presently preferred. As an example, the "Industry Matrix" table has three fields of data, two of which are primary keys ("IndustryType" and "Industry Code"). The third field, not a primary key, is "IndustryName." The lines between table blocks indicate links between fields in different tables. In some cases, linked fields have the same exact name, but in other cases, a different field name is used. The symbols at link points ("crows feet") indicate the dependency of one table on another in the standard manner practiced by database programmers.

FIG. 4 crosswalks a number of databases thus allowing estimated up-to-date occupation, education, and skill gaps that can be forecast into the future based on industry and occupation forecasts. For each region specified within JobsEQ™, the industry mix of that region is a starting point from which total occupations are estimated based on the distribution of occupations-to-industries in the region, state, or nation. The algorithm takes the percent distribution of occupations and assumes the same distribution occurs in the region. For example, if 2% of all workers in the textile industry are secretaries, then it is assumed that 2% of the specified region's occupations related to textiles are secretaries. Education, training, and skills needed for occupations are estimated in a like manner by using crosswalks or CEA data mining that links the information to occupations.

Forecasts of occupations and industries, which reflect the supply for workers as well as the demand for workers, identifies current and future estimated gaps in the region selected by assuming that occupations and industries in the region grow at the same rate as those of the nation. For example, if 90% of a region's employment is in textiles, then the region's employment will be forecast to decline because the textile industry is forecast to decline in the nation. In contrast, a region where 90% of employment is in professional services will be forecast to grow because professional services is forecast to be a fast growing industry in the nation.

Data from the various data sources are gathered and reorganized into the tables of database 112. The organization of data in database 112 in part makes it possible for a user to obtain answers to various inquiries. Three exemplary tables with sample records are illustrated below.

Three exemplary tables with sample records are illustrated below.

The following are sample records from the "Total Unemployment" table.

Year	Qtr	RegionType	RegionCode	Unemployment
2004	4	1	3	165
2004	3	1	3	160
2004	2	1	3	150
2004	1	1	3	159

The following are sample records from the "Region Matrix" table.

RegionTyp	RegionCode	RegionName
1	1	Accomack
1	3	Albermarle
1	5	Alleghany

The following are sample records from the table "Employment Projections by Industry" table.

RegionType	RegionCode	NAICS	OccupationCode	NAICSGrowth	ProjectEmployment
1	1	236118	41-9099	8.31	0.1687
1	1	236118	43-3021	8.31	0.00139382

FIG. 5 is a schematic diagram explaining CEA datamart database 134 (see FIG. 3). The CEA datamart database 134 stores Normalized ES-202 data. The CEA datamart database is a database that stores information in a useful form after it has been imported, normalized and otherwise processed as shown in FIG. 3. The CEA datamart database 134 has three tables: "Firm", "Branch", and "BranchData." The "Firm" table stores the name of each company or firm having data in database 112. The "Firm" table includes, for example, the name and address of such companies. The "Branch" table stores information related to each branch (location) of a company including, for example, names under which it trades, geographical designators, local branch addresses, phone numbers, etc. The "Branch Data" table stores economic data related to particular branches. Each branch of a company or firm is assigned a "branchID" designating that branch. Data points related to a particular branch are stored in the "Branch-

Data" table as individual records. There can be multiple records for a given "BranchID." For example, one branch may have a record for each quarter of multiple years.

As shown in FIG. 5, the upper portion of each table block shows one or more fields of data that are primary keys. Multiple primary keys are known in the database world as "compound keys." The lower portion of a table block shows the remaining fields of data that are not primary keys. The symbols at link points ("crows feet") indicate the dependency of one table on another in the standard manner practiced by database programmers.

FIG. 6 is a diagram of a login screen of the "JobsEQ™" web pages which provides a vehicle for delivering data from database 112 to a web-based end user. At this website, prior to login, the user is presented with the following menu:

Menu Options

- Home Page
- Become a Member
- Press Releases
- Resume Posting
- About JobsEQ™
- Contact us

Resources

- CEA
- Demo

FIG. 7 is a diagram showing a post login main menu of the "JobsEQ™" web pages. After login, the user is presented with the following main menu selections:

- Labor Analytics
- Knowledge Analytics
- Career Analytics
- Demographic Analytics
- Policy Development

Each of these main menu selections has sub menu selections as will be further described below.

FIGS. 8, 9 and 10 are screenshots of the upper, middle and lower portions (when scrolling) of a "Digital Dashboard" from which a user can navigate the JobsEQ™ web pages after login. Various clickable choices are presented to the user in the form of chart and graph samples to that illustrate some of

the capabilities of the system. For example, there are clickable charts for: "Total Wages", "Annual Average Wages per Worker", "Change in Employment", "Labor Inventory", "Entrepreneurial Activities Quarterly", "Entrepreneurial Activities Yearly", "Labor Supply and Demand", "Unemployment Rate", and "Productivity".

A powerful feature of the inventions relates to the manner in which pieces of data are related to each other and presented to the user in the form of charts, graphs and maps that allow a user to answer questions that cannot otherwise be easily answered and to have those answers presented in a user friendly manner.

FIG. 11 is a flowchart showing the general process flow explaining how data is extracted from the database, manipulated and delivered to an end user. At block 200, an end user selects a particular analytical tool to be used in extracting data and presenting it in a selected form. When a particular tool is

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selected, the user is presented with various choices for narrowing data that are consistent with the use of the particular tool selected. For example, in block 202 the user selects particular geographical regions, industries and occupation. Data in accordance with the user selection at block 204 is extracted from database 112. At block 206 the user makes follow up choices regarding geographical regions, industries and occupations. At block 208 the user selects a format for data display. At block 210 data are retrieved from database 212 using the JobsEQ™ analytical tool 214. A display format is decided at block 216. Display occurs at block 218. At block 220 the user has an opportunity to drill down for more detailed data. At block 222 there is a final display of data in chart or table from that can be copy-pasted to other documents such as Microsoft Word, Excel or PowerPoint. Following are specific examples of such data retrieval and display.

FIG. 12 is a schematic diagram showing an example of how a user obtains information related to “Total Wages”. A user can “drill down” into the data stored in database 112 and retrieve data related to wages that relate to a particular geographical region, a particular industry sector, a particular industry group and a particular industry. At the bottom portion of the figure is a block labeled “Jobs EQ™ Digital Dashboard” which is shown in screenshots in FIGS. 6, 7 and 8. By clicking on the “Total Wages” chart displayed on the “Jobs EQ™ Digital Dashboard”, the user is presented with a screen as shown in FIG. 13.

FIG. 13 is a screenshot of the “Total Wages” screen to which a user is taken after clicking on the “Total Wages” chart on the “Digital Dashboard” shown in FIGS. 8, 9 and 10. From the total wages drilldown screen shown in FIG. 11, a user can select a particular: “Report Type”, “Region Level”, “Baseline Region”, “County or City”, “Industry Sector”, “Industry Group” and “Industry”. These choices are made using pull down menus in the upper portion of the screen. In FIG. 12, these choices are represented by the flow chart blocks shown in the upper portion of the figure. When a user selects “Total Wages”, he is presented with a series of pull down menu choices represented by the diamond shaped blocks in the upper portion of FIG. 12. Menu choices available in each category are consistent with previously made menu choices. Thus, the menus are “intelligent” and do not allow the user to attempt to assemble data that are not logically consistent. After the menu choices are made that specify “Industry Sector”, “Region”, etc., at block “Stored Data SQL” data are retrieved from database 112. The data are processed in accordance with “Stored Procedures” and transformed into time series data which are then graphed for presentation to the user. Specifically, a structured query language (SQL) query is used to transform the data from the format stored in the JobsEQ™ database into time-series data.

The “Total Wages” data displayed is quarterly (that is, the total wages earned in a region over the course of a given quarter). Recessions are identified by shading. Total wages are the broadest indicator of the total wealth of a region. Changes in total wealth measure the degree to which a region’s standard of living is changing. The Total Wages chart can be used to track trends in wealth creation across all industries or in specific industries. Information obtained from the Total Wages charts, along with the Percent Change in Employment and Annual Average Wages per Worker charts, provides insight to questions such as: Are total wages rising because of average wage growth, employment growth, or both? Are living standards in a given region increasing in tandem with other regions? How reliant on a particular industry is a region? Which industries are contributing the most to wealth creation?

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FIG. 14 shows an example of how a user obtains information related to “Annual Average Wages Per Worker”. A user can “drill down” into the data stored in database 112 and retrieve data related to average annual wages per worker relating to a particular geographical region, a particular industry sector, a particular industry group and a particular industry. As with “Total Wages” the user can begin by making choices from the “Jobs EQ™ Digital Dashboard” which is shown in screenshots in FIGS. 8, 9 and 10. The user can begin to drill down for “Annual Average Wages Per Worker”. The user can select “Region”, “Industry Sector”, “Industry Group” and “Industry”. These choices are made using pull down menus in the upper portion of the screen. In FIG. 14, these choices are represented by the flow chart blocks shown in the upper portion of the figure. When a user selects “Annual Average Wages Per Worker”, he is presented with a series of pull down menu choices represented by the diamond shaped blocks in the upper portion of FIG. 10. Menu choices available in each category are consistent with previously made menu choices. Thus, the menus are “intelligent” and do not allow the user to attempt to assemble data that is not logically consistent. After the menu choices are made that specify “Industry Sector”, “Region”, etc., at block “Stored Data SQL” data are retrieved from database 112. The data are processed in accordance with “Stored Procedures” and transformed into time series data which are then graphed for presentation to the user. Specifically, a structured query language (SQL) query is used to transform the data from the format stored in the JobsEQ™ database into time-series data.

The chart displays the annual average wages per worker over time. Information is shown for the selected region, the state, and the peer (if applicable). This chart can also be specialized for a specific industry as chosen through the selection criteria. The data displays quarterly changes. Recessions are identified by shading. (See Charts—Menu Bar and Functions for information on chart functionality.) In the illustrated example, as of the first quarter of 2003 the average worker in Southwest Virginia was making \$26,299 a year. The average worker in the state of Virginia was making \$37,924. These figures represent the total wages and salaries (including some stock options that were exercised) in the region divided by the total number of workers in that region.

Chart Applications

To measure the relative average individual wealth growth of a region, which reflects changes in living standards.

To identify industries making the greatest contribution to relative individual wealth.

To analyze historical trends.

By selecting areas within a region, the region’s relative individual wealth creation can be analyzed by locale.

FIG. 15 shows an example of how a user can drill down to obtain cost of living information. This information is found in a table below the chart that displays the annual average wages per worker over time. Information is shown for the selected region, the state, and the peer (if applicable). This table showing cost of living adjusted wages and salaries can also be specialized for a specific industry as chosen through the selection criteria. The data in the table displays the cost of living adjusted wages and salaries for the latest quarter of data available. The Cost of Living Index estimates the relative price levels for consumer goods and services. When applied to wages and salaries, the result is a measure of relative purchasing power. This table displays information for the selected region, its peer (if applicable), the state, and the nation.

	Cost of Living Index (base US)	Cost of Living Index (base Virginia)	Annual Average Salary	VA Purchasing Power	US Purchasing Power
01 - Southwest VA W1A	78.2	83.0	\$26,298	\$31,669	\$33,625
17 - West Piedmont W1A	80.6	85.6	\$25,903	\$30,273	\$32,143
Virginia	94.2	100.0	\$37,924	\$37,924	\$40,266
US	100.0	106.2			

This table enables the user to estimate the relative cost of labor in Virginian regions that is attributable to cost of living differences. For example:

Using the numbers in the above table, we find that it is 17.0% less expensive to live in WIAOne than the average Virginia county or city. As a result, the lower wages paid in WIAOne can be stretched further because residents in WIAOne tend to pay lower prices for many goods and services as well as rents and mortgage payments. Because of the lower cost of living, an individual in WIAOne earning \$26,298 has the same purchasing power as the average Virginia resident that earns \$31,669. Thus, if a WIAOne resident earning \$26,298 per year decided to move out of the area and into a typical state county, that individual would need to earn \$31,669 to maintain their standard of living.

FIG. 16 shows an example of how a user obtains information reflecting the percentage change in employment. This chart displays the percentage change in employment over time. Information is shown for the selected region, the state, and the peer (if applicable). The second chart in FIG. 14 shows that three trend lines appear when 'peer' is chosen. The 'peer' is a region pre-determined by the client or chosen based on analytics in JobsEQ™ that identifies a peer based on the region's population size, industry mix, and ruralness. This chart can also be specialized for a specific industry as chosen through the selection criteria. The third chart shows total employment where government institutions are not included in the total. For example, state or federal hospitals would not be included in total employment if the 'separate out government' box is checked by the user. The data displays quarterly changes. Recessions are identified by shading. (See Charts—Menu Bar and Functions for information on chart functionality.)

Chart Applications

Are some regions facing a greater decline in employment than others?

Which industries are posting the largest increases or decreases in employment?

Are changes in employment levels cyclical?

How is employment affected by recession periods?

FIG. 17 shows an example of how a user obtains information regarding quarterly entrepreneurial activity. These choices are represented by the flow chart blocks shown in the upper portion of the figure. When a user selects "Quarterly Entrepreneurial Activity", he is presented with a series of pull down menu choices represented by the diamond shaped blocks in the upper portion of FIG. 10. Menu choices available in each category are consistent with previously made menu choices. Thus, the menus are "intelligent" and do not allow the user to attempt to assemble data that is not logically consistent. After the menu choices are made that specify "Industry Sector", "Region", etc., at block "Stored Data SQL" data are retrieved from database 112. The data are

processed in accordance with "Stored Procedures" and transformed into time series data which are then graphed for presentation to the user.

Specifically, a structured query language (SQL) query is used to transform the data from the format stored in the JobsEQ™ database into time-series data.

For the selected criteria, this chart will display the historical number of exiting and entering entrepreneurial firms in a region by quarter.

The following are definitions of terms used herein:

Entrepreneurial firms—firms with ten or fewer employees (also referred to as 'small businesses')

Exiting firms—entrepreneurial firms that shut down operations or leave the specified region during a time period

New firms—entrepreneurial firms beginning operations during a time period (including those entering a specified region)

The Entrepreneurial Activities chart can be specialized by region, industry, or occupation (see Analytic Comparison). When drill-down by occupation is selected, the chart will display information on entrepreneurial firms that use that occupation. (See Charts—Menu Bar and Functions for information on chart functionality.)

Applications

This chart can be used to gauge the innovative capacity of a regional economy in terms of small business activity. Innovative capacity is a region's ability to innovate and adapt to changing market conditions. One method of analysis is to look for 'cross-over points'—the points in time at which the number of exiting firms equals the number of entering firms. These points can be found on the charts by identifying all points at which the blue and green lines intersect. Points at which the exiting firms begin to exceed the number of entering firms portend employment decline and further deterioration. When the reverse is true and new firms begin to outpace exiting firms, economic growth is more likely. Because this chart is not seasonally adjusted, the data may display a large number of spikes. More ease of analysis may be obtained with annual data found in Entrepreneurial Activities Yearly, also found on the digital dashboard. Information obtained from the Entrepreneurial Activities Quarterly graphs provide insight to questions such as:

Does the region exhibit high innovative capacity?

Does the number of small firms exiting exceed the number of small firms entering?

How does the influx and outflow of firms relate to recession periods?

Which industries exhibit greater innovative capacity?

FIG. 18 shows an example of how a user obtains information regarding annual entrepreneurial activity. For the selected criteria, this chart will display the historical number of exiting and entering entrepreneurial firms in a region by year. These choices are represented by the flow chart blocks

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shown in the upper portion of the figure. When a user selects “Annual Entrepreneurial Activity”, he is presented with a series of pull down menu choices represented by the diamond shaped blocks in the upper portion of FIG. 10. Menu choices available in each category are consistent with previously made menu choices. Thus, the menus are “intelligent” and do not allow the user to attempt to assemble data that is not logically consistent. After the menu choices are made that specify “Industry Sector”, “Region”, etc., at block “Stored Data SQL” data are retrieved from database 112. The data are processed in accordance with “Stored Procedures” and transformed into time series data which are then graphed for presentation to the user. Specifically, a structured query language (SQL) query is used to transform the data from the format stored in the JobsEQ™ database into time-series data.

The Entrepreneurial Activities chart can be specialized by region, industry, or occupation (see Analytic Comparison). When drill-down by occupation is selected, the chart will display information on entrepreneurial firms that use that occupation. (See Charts—Menu Bar and Functions for information on chart functionality.)

Applications

This chart can be used to gauge the innovative capacity of a regional economy in terms of small business activity. Innovative capacity is a region’s ability to innovate and adapt to changing market conditions. One method of analysis is to look for ‘cross-over points’—the points in time at which the number of exiting firms equals the number of entering firms. These points can be found on the charts by identifying all points at which the blue and green lines intersect. Points at which the exiting firms begin to exceed the number of entering firms portend employment decline and further deterioration. When the reverse is true and new firms begin to outpace exiting firms, economic growth is more likely. Information obtained from the Entrepreneurial Activities Yearly graphs provide insight to questions such as:

- Does the region exhibit high innovative capacity?
- Does the number of small firms exiting exceed the number of small firms entering?
- How does the influx and outflow of firms relate to recession periods?
- Which industries exhibit greater innovative capacity?

FIG. 19 shows an example of how a user obtains information regarding labor inventory. The Labor Inventory tool, found on the digital dashboard, provides information on the composition of the workforce in a given region as well as detailed information on any given occupation. The following charts and tables are available in this tool (with applications listed below):

- Labor Inventory Charts—the initial chart shows
 - % of workforce by industry in a given region
 - % of workforce by firm size
 - % of workforce by industry and given firm size

Employment by Occupation Chart (see FIG. 20)—obtained by clicking on an industry slice of the Labor Inventory by Industry Chart (Labor Inventory Charts shown in FIG. 17) % employment by occupation within an industry. Average Wages by Industry & Employment Occupation by Detail (see FIG. 21)—obtained by clicking on an occupation slice of the Employment by Occupation Chart (see FIG. 20) average wages in a region by industry % employment by minor occupation. An Occupation Profile (see FIG. 22) is obtained by clicking on a slice of the Employment Occupation by Detail Chart. Occupation attributes are broken down by knowledge, skills, ability, and activity.

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FIG. 20 shows an example of a first drill down for more detailed labor inventory data. The Labor Inventory tool, found on the digital dashboard, provides information on the composition of the workforce in a given region as well as detailed information on any given occupation. The following charts and tables are available in this tool (with applications listed below):

- Labor Inventory Charts—the initial charts shown
 - % of workforce by industry in a given region
 - % of workforce by firm size
 - % of workforce by industry and given firm size

Employment by Occupation Chart—obtained by clicking on an industry slice of the Labor Inventory by Industry Chart (Labor Inventory Charts)

- % employment by occupation within an industry
- Average Wages by Industry & Employment Occupation by Detail—obtained by clicking on an occupation slice of the Employment by Occupation Chart
 - average wages in a region by industry
 - % employment by minor occupation

Occupation Profile is obtained by clicking on a slice of the Employment Occupation by Detail Chart. Occupation attributes are broken down by knowledge, skills, ability, and activity.

FIG. 21 shows an example of a second drill down for more detailed labor inventory data. An Average Wages by Industry chart is obtained by drilling down through the Labor Inventory by Industry Chart and the Employment by Occupation Chart. This chart displays the average wages for industries in a given region. The specific industry selected in the drill-down process will be highlighted.

FIG. 22 shows an example of part two of a labor inventory data drilldown. A chart of Employment Detail for Occupations is obtained by drilling down through the Labor Inventory by Industry Chart and the Employment by Occupation Chart. This chart displays the mix of workers within the selected occupation broken down by minor occupation group. By clicking on one of the minor occupation groups in this chart, the user obtains access to the Occupation Profile.

FIG. 23 shows an example of data retrieval related to the unemployment rate drilldown. These choices are represented by the flow chart blocks shown in the upper portion of the figure. When a user selects “Unemployment Rate”, he is presented with a series of pull down menu choices represented by the diamond shaped blocks in the upper portion of FIG. 12. Menu choices available in each category are consistent with previously made menu choices. Thus, the menus are “intelligent” and do not allow the user to attempt to assemble data that is not logically consistent. After the menu choices are made that specify “Industry Sector”, “Region”, etc., at block “Stored Data SQL” data are retrieved from database 112. The data are processed in accordance with “Stored Procedures” and transformed into time series data which are then graphed for presentation to the user. Specifically, a structured query language (SQL) query is used to transform the data from the format stored in the JobsEQ™ database into time-series data.

The Unemployment Rate chart, found on the digital dashboard, displays the percentage of the labor force that is unemployed. The unemployment rate is determined by dividing the total number of unemployed workers by the total labor force. The total labor force is the sum of both the employed workers and the unemployed workers. This chart displays data for the selected region, the state, and the peer (if applicable). (See selection criteria regarding the selection process.) Unemployment data by industry can be obtained via an Ad-Hoc Report. The data displayed are monthly. Recessions are identified by

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shading. (See Charts—Menu Bar and Functions for information on chart functionality.) This chart has a built-in scrolling function. The dark scroll bar in the bottom right corner of the chart can be slid along the horizontal axis to view data as far back as 1990.

Applications

In addition to the Percent Change in Employment chart, the Unemployment Rate chart is an alternate measure of the strength or weakness of a region's labor market. High unemployment in a region reflects labor market weakness. However, the unemployment chart should be used with caution. For instance, a declining unemployment rate may reflect the fact that the labor force is declining (people are leaving the region) rather than an improving labor market. In addition, the unemployment rate is considered a less reliable measure than changes in employment because the unemployment rate is derived mainly from surveys while employment figures are obtained from tax filings representing 98% of all employed. This chart can be also used to monitor unemployment rate trends to determine whether a region is susceptible to business cycle trends (cyclical unemployment) or industrial trends (structural unemployment). Cyclical unemployment is associated with a shift in the business cycle that causes a downturn in economic activity (i.e., a recession). In contrast, structural unemployment arises when employer's needs do not match workforce skills, education, or training. Information obtained from the Unemployment chart provides insight to questions such as:

Does the region exhibit higher or lower unemployment than the state?

Does the region's unemployment trend (increases and decreases) mirror the states?

How has unemployment been affected by recession periods?

Are any unemployment trends in evidence?

FIG. 24 illustrates the production of a map showing % change in employment from a year ago. The Percentage Change in Employment maps identifies employment gains or losses for all counties and cities in a state. The user can choose from two time-period options: From Last Quarter and From Last Year. (The From Last Quarter changes are not seasonally adjusted.) This figure is illustrative of the system's mapping capability. Map templates can be "stuffed" with data mined from database 112 in answer to various queries and displayed in this user friendly manner.

As a second example (not illustrated) one could produce a map showing the unemployment rate. The Unemployment Rate map displays the percentage of the labor force that is unemployed in the counties in Virginia. The unemployment rate is determined by dividing the total number of unemployed workers by the total labor force. The total labor force is the sum of both the employed workers and the unemployed workers. All counties and cities in the state are shown when this analytic is chosen.

As a third example (not illustrated) one could produce a map showing commuting in to a region. The Commuting Into a Region map identifies the number of workers that commutes into the region of interest. The region of interest is defined by the user by means of drop down lists that allow for the choice of 'Region Level', 'Baseline Region', and 'County or City'.

FIG. 25 illustrates the production of a chart showing labor and supply and demand. Menu choices from the web page are represented by the flow chart blocks shown in the upper portion of the figure. When a user selects "Labor Supply and Demand", he is presented with a series of pull down menu choices represented by the diamond shaped blocks in the

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upper portion of FIG. 10. Menu choices available in each category are consistent with previously made menu choices with the added feature of allowing the user to choose the supply and demand by industry or occupation. Thus, the menus are "intelligent" and do not allow the user to attempt to assemble data that is not logically consistent. After the menu choices are made that specify "Industry Sector", "Region", etc., at block "Stored Data SQL" data are retrieved from database 112. The data are processed in accordance with "Stored Procedures" and transformed into time series data which are then graphed for presentation to the user. Specifically, a structured query language (SQL) query is used to transform the data from the format stored in the JobsEQ™ database into time-series data.

This important tool, found on the digital dashboard, can forecast the supply and demand of labor for a given region. Labor can be analyzed by industry or occupation. Eight different scenarios are offered in this help section to illustrate the interpretations and uses of the typical output graphs.

Industry Drill-Downs:

I. Industry in decline; component occupations faring better
II. Industry in decline; component occupations declining faster

III. Industry in expansion; component occupations trailing
IV. Industry in expansion; component occupations faring better

Occupation Drill-Downs:

V. Regional industries in decline; occupation faring better
VI. Regional industries in decline; occupation declining faster

VII. Regional industries in expansion; occupation trailing
VIII. Regional industries in expansion; occupation faring better

Industry Drill-Downs:

I. Industry in decline; component occupations faring better

In this scenario, employment in an industry is forecast to decline (the green line is falling). Occupations that are employed by that industry, however, are either not forecast to decline as much or are forecast to expand (the red line is above the green line). This scenario is the result of these component occupations also being used in one or more other industries that are either expected to expand employment or at least not contract as rapidly as the selected industry.

Therefore, if a region faces this scenario with an industry forecast to decline, but component occupations are forecast to fare significantly better than the industry (the red line is much higher than the green line), then there may be good prospects for workers in the given industry who will lose their jobs; i.e. there exist healthier industries which also employ their occupation. Some of these prospects, however, may be outside the region). The closer the red line is to the green in this scenario, the fewer prospects for the unemployed job-seeker in the same occupation. The numbers in the right margin of the chart indicate employment represented by each line for the last year of the forecast (above, the year 2012).

II. Industry in decline; component occupations declining faster (Industry drill-down). In this scenario, employment in an industry is forecast to decline (the green line is falling) but the component occupations are forecast to have a steeper decline (the red line is below the green line). This scenario is the result of there being few, if any, industries healthier than the selected industry that employs most of the component occupations. Therefore, if a region contains such an industry, workers in the industry who become unemployed will very likely struggle to find openings for their occupation in another industry.

III. Industry in expansion; component occupations trailing (Industry drill-down). In this scenario, employment in the industry is forecast to expand (the green line is rising). Occupations that are employed by that industry, however, are either not forecast to expand as much or are forecast to decline (the red line is below the green line). This scenario is the result of the given industry growing at an above-average rate for industries that use the component occupations. Such a growing industry would have a high demand for its component occupations. Even though the occupations may be expanding across the nation, even though more workers may be getting trained for these occupations, there is a high chance of a shortage of these occupations in the selected region. The supply will be hard-pressed to keep up with the demand. This potential training gap would carry ramifications to educators as well as practitioners in economic development.

FIG. 26 shows an example of a chart produced to demonstrate "Labor Supply and Demand for Richmond."

FIG. 27 shows an example of a chart produced to demonstrate "Labor Supply and Demand for the Northern Virginia MSA". Of course the geographical region used is merely exemplary.

FIG. 28 illustrates the on line help manual available to users. Users can access the on line help manual by clicking on the question mark (?) above the chart or clicking 'Help' which is found in the upper right hand corner of each screen. The help function explains such items as the analytics found in JobsEQ™, the data sources, and how to apply the analytic. In addition, definitions of occupations, industries and instructional programs can be found by inserting key words in the search box found in the help section.

FIG. 29 illustrates the production of "Career Training Ladders." Career training ladders identify the career paths that individuals may follow (across or within industries) as they increase their knowledge and capabilities. Career training ladders are particularly useful to job-seekers and training professionals. The career training ladders shown in JobsEQ™ detail the vertical relationships among occupations that were created by CEA using data mining techniques. Within each occupation family, a worker in lower-level occupations can move to higher-level ones through proper training and experience.

The illustrated example of a career ladder is the nursing occupation family which is embedded in the Medicine and Dentistry Ladder. A worker can move from low-level occupations such as Home Health Aides, to Nursing Aides, to Licensed Practical and Vocational Nurses, all the way to Registered Nurses. Characteristics of the occupation are used to vertically link occupations. The numbers on the career training ladders that are shown in parentheses represent an estimate of the number of individuals in the given region that are employed in that occupation.

The user can obtain the following information for the occupation by clicking on the occupation title in the training ladder: description of the occupation; wages for the occupation for various industries; skills and other attributes needed to succeed in the occupation; and instructional programs suggested to quality for the occupation.

FIG. 30 is a schematic diagram illustrating the production of a "Willing and Able" chart. The Willing and Able tool allows the user to specify an occupation and to then examine related occupations for their appeal as career-change options.

For this analysis, the user must first select a major occupation and then a minor occupation (see occupation selection for more details). The data for the minor occupation will then be displayed when the Go button is clicked. Regional selection is also an option for this analytic. The chart produced is

shown in Figure CA. Each of the small squares represents an occupation. When the mouse pointer is moved over a square and held stationary, a pop-up text will identify the name of the occupation as well as the average salary for the occupation in the region selected. This analysis considers a worker in the selected occupation who may be looking to enter a different occupation. This person is considered "willing" to take a new job that requires no more than a 10% pay cut from a present or previous job. The horizontal line across the middle of the chart (at approximately \$26,000 in the above example) represents this threshold. Above the line are occupations the person would be "willing" to take, below the line would be occupations the person would be "not willing" to take.

Occupations that someone would be "able" to enter are those in which little or no training is required beyond current qualifications. Occupations that a worker would be "not able" to enter are those that may be related to the person's present occupation, but would require more extensive training, education, or experience.

Applications

This tool has primary applications in workforce development. For example, a group of workers may have been laid-off and there are no prospects for their current occupations; they will be in need of career changes. The four quadrants in this analysis group potential new occupations by their appeal:

"Willing/Able"—Upper-right quadrant. Occupations in this category will require little further training and will offer salaries ranging from a small pay cut to a salary increase.

"Willing/Not Able"—Upper-left quadrant. Occupations in this category offer suitable salaries but will require more extensive training or education preparation.

"Not Willing/Able"—Lower-right quadrant. Occupations in this category require little further training but the salaries constitute more than a 10% cut in pay.

"Not Willing/Not Able"—Lower-left quadrant. Related occupations in this category are likely the least desirable for a career change. These require more extensive training or education and also offer salaries that would be more than a 10% cut in pay. Nevertheless, they are related occupations, and they may be the only ones that have growth prospects in the region in question (see occupation drill-downs in Labor Supply and Demand for analysis of this question).

FIG. 30 illustrates the method used to produce the chart shown in FIGS. 31 and 32.

FIG. 31 graphically represents a gap in employment in the medicine/dentistry field.

FIG. 32 is a graphical representation of occupations with the largest forecasted growth and decline in a particular region. This process identifies gaps in occupations or training programs expected to occur over the next ten years. True equilibrium takes into account the demand for an occupation and/or individuals with certain training/degrees on the industry side and on the supply of such individuals on the occupation side. JobsEQ™ adjusts the gaps to include dynamics statistics like the emerging workforce (those entering the workforce for the first time), the number unemployed, population growth rates, retirements and other impacts to the type and inventories of workers by region.

FIG. 33 is a schematic diagram illustrating a "What If" report. The 'What If Report' is identified on the 'development and policy' analytics under 'member options.' It identifies the estimated number of workers required in an industry chosen by the user by using the drop down industry choices noted in earlier analytics. By using the selection criteria the user can select a region, an industry, and a firm size for a test scenario. The user can also select the number of occupations to show

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for the firm (explained in more detail below). After all criteria are selected, clicking on the “Go” button will start the analytic and display the results.

The resulting table shows detailed information for each occupation that would be required to support the given firm. The following fields are shown:

Occupation code (SOC Code)

Occupation title

Required Employees—Number of employees needed in the specified occupation.

Current Employees—Number of employees currently employed in the occupation.

Current Unemployed—Number of workers unemployed in the occupation.

State Average Wage—Average wage for selected occupation in the given region.

National Average Wage—Average wage for selected occupation for the nation.

Employment Extended—Number of currently employed workers in other occupations who have the skills to fulfill the specified position’s needs.

Unemployed Extended—Number of currently unemployed workers in other occupations who have the skills to fulfill the specified position’s needs.

The analysis for the impact of a firm closing follows closely the analysis of a firm relocation. To see the impact of a firm closing, the relocation analysis is performed as described above, but for the firm size a negative number is entered instead of positive. The results will appear similar, but the numbers in the required employment column now represent lost employment due to the firm closing.

Applications of the ‘what if report’ include the following:

If a firm enters a region, what occupations will be needed?

Are skilled workers available in the region to fill these positions?

Does the region have currently unemployed workers with skills similar enough to fill the new firms needs?

If a firm is leaving a region, what occupations are expected to be lost?

The following is an explanation of “Extension Occupations” used for the ‘what if’ and training ladder maps. The process used to find related occupations is based on the vector model. This involves giving each occupation a location in a multi-dimensional space based upon a set of attributes in one of the following categories: abilities, knowledge, skills, interests, tasks, and work activities. Each attribute in this set is given a weight between 0 and 1. After computing this vector for each occupation, the cosine distance formula is used to measure the similarity of two occupations.

The cosine distance formula is defined as the following:

$$\frac{\sum_{i=1}^T f(v_i) \cdot f(w_i)}{\sqrt{\sum_{i=1}^T f(v_i)^2} \cdot \sqrt{\sum_{i=1}^T f(w_i)^2}}$$

Where v and w represents two occupations and T represents the complete set of attributes in a particular category. In this formula, the function f represents a dampening function, which is log. When two occupations have similar attributes, their vectors become coincident and the cosine distance approaches 1. If the occupations are unrelated, the vectors will be orthogonal with a value approaching 0.

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This method is repeated for each category of attributes. The total cosine distances are combined with equal weights (1/6). Therefore, we define the final similarity of two occupations as the following:

$$OccupationSim(A, B) = \sum_{i \in Categories} w_i \cdot cossim(A_i, B_i)$$

FIGS. 34 and 35 are schematic diagrams (upper and low portions of screens, respectively) illustrating the balanced scorecard analytic which is part of the policy development category for JobsEQ™.

With JobsEQ™, you get the most complete balanced scorecard solution for workforce, economic, and education development and policy reform brings together the various ‘silo’ agencies across localities, regions, states and countries for:

Strategy

The Strategy component captures and organizes Balanced Scorecard information. It translates volumes of data into meaningful information about enterprise output that can be viewed from many perspectives, including vision, mission, strategy, objectives, measures and initiatives. An appropriate balanced scorecard can scan from top to bottom, providing a corporate-level scorecard, then moving on to views of business units, departments and so on; the view of the user is balanced with the day-to-day activities of the user such that the user’s performance is measured in terms of activities over which the user’s ‘sphere of influence’ is directly linked.

Communications

A scorecard offers an accurate assessment of the progress users have made translating strategy into action. It can monitor key leading and lagging indicators—allowing you to assess which strategies are yielding the desired results while working within the best practices for Baldrige and Sixth Sigma business norms. The Communications component provides a way to communicate a strategy to the rest of the organization. Strategic Performance Management offers enabling options which facilitate collaborative efforts, empowering organizations with integrated strategies and development environments.

Updateable

A complete information-analysis solution must do more than just provide data access. It should also enable the analysis of data outputs in new and different ways while simultaneously anticipating business trends and policy reforms. Strategic performance management automates the implementation of a balanced scorecard—enabling users to update the scorecard at regularly scheduled intervals. Users can query, report, forecast and simulate economic trends modeling. Users can access all relevant data sources immediately knowing that performance results are based on the latest, most accurate input to the scorecard.

The inventions have been explained in part by using many examples. References to time, geographical regions, etc. are intended to be exemplary. The principles explained in this patent can be utilized with data relating to various regions, time frames, etc. Thus, it is intended that the claims not be limited to specific geographical regions, time frames, etc.

The invention claimed is:

1. An information system for assessing demand for occupations and skills and the need for various training and instructional programs comprising:

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- a. a relational database resident in a computer-readable medium containing economic development information, workforce development information and education key information, such as historical and forecasted economic data regarding economic variables including jobs, unemployment, wages, productivity, and any changes therein;
- b. a graphical user interface providing distributed computer network access to said database and a plurality of software implemented user tools for assembling and processing the data in ways meaningful to the user, including correlation of the information in said database by one or more of the following parameters: region, industry, employer characteristic, occupation; worker attribute; demographics, said graphical user interface and said tools being operable to allow a user to selectively retrieve analysis of one or more of the following:
- forecast the supply and demand of labor for a given region;
 - career training ladders identifying the career paths that individuals may follow or firms may utilize to improve their internal labor force;
 - related occupations for their appeal as career-change options;
 - occupations with the largest forecasted growth and decline in a particular region;
 - the estimated number of workers required in an industry chosen by the user; and
 - workers available in the region by skill,
- wherein said graphical user interface and said tools are operable to allow a user to selectively retrieve analysis of the workers available in a region for a user-selected industry on a user readable display indicating:
- a plurality of occupations;
 - a number indicating the number of required employees for each of said occupations;
 - a number indicating the number of employed persons in said region corresponding to each of said occupations; and
 - a number indicating the number of unemployed persons in said region corresponding to each of said occupations,
- wherein one of said software implemented tools assigns an occupation attribute value between 0 and 1 for each of a plurality of pre-defined occupation attributes to each of said occupations;
- wherein said software implemented tool assigns an occupation vector in multi-dimensional space to each of said occupations based on said occupation attribute values corresponding to each of said occupations;
- wherein said software implemented tool computes the angular cosine distance between every pair of said occupation vectors utilizing a cosine distance formula; and
- wherein said software implemented tool classifies a first occupation as an extension occupation in relation to a second occupation if said first occupation is similar to said second occupation when said angular cosine distance between the occupation vector corresponding to said first occupation and the occupation vector corresponding to said second occupation is less than a pre-determined threshold; and
- c. a computer for processing said data.
2. An information system for assessing demand for occupations and skills and the need for various training and instructional programs comprising:
- a. a relational database resident in a computer-readable medium containing economic development information, workforce development information and education key information, such as historical and forecasted economic data regarding economic variables including jobs, unemployment, wages, productivity, and any changes therein;

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- economic data regarding economic variables including jobs, unemployment, wages, productivity, and any changes therein;
- b. a graphical user interface providing distributed computer network access to said database and a plurality of software implemented user tools for assembling and processing the data in ways meaningful to the user, including correlation of the information in said database by one or more of the following parameters: region, industry, employer characteristic, occupation; worker attribute; demographics, said graphical user interface and said tools being operable to allow a user to selectively retrieve analysis of one or more of the following:
- forecast the supply and demand of labor for a given region;
 - Career training ladders identifying the career paths that individuals may follow or firms may utilize to improve their internal labor force;
 - related occupations for their appeal as career-change options;
 - occupations with the largest forecasted growth and decline in a particular region;
 - the estimated number of workers required in an industry chosen by the user; and
 - workers available in the region by skill,
- wherein said graphical user interface and said tools being operable to allow a user to selectively retrieve analysis of related occupations for their appeal as career-change options in a region provide a user readable display indicating:
- a four-quadrant chart;
- wherein the four quadrants of said chart are: 1) Not willing, not able, 2) Not willing, but able, 3) Willing, but not able, and 4) Willing and able;
- wherein all occupations in said region are represented on said chart as a data point in relation to a user of said information system
- wherein "willing" is defined as an occupation with a salary at or above a pre-defined percentage of said user's current or most recent salary;
- wherein "not willing" is defined as an occupation with a salary below said pre-defined percentage of said user's current or most recent salary;
- wherein "able" is defined as an occupation with skills similar to the skills of said user's current or most recent occupational position; and
- wherein "not able" is defined as an occupation with skills dissimilar to the skills of said user's current or most recent occupational position; and
- c. a computer for processing said data.
3. The information system of claim 2 wherein said pre-defined percentage of said user's current or most recent salary is 90%.
4. The information system of claim 2
- wherein said software implemented tool assigns an occupation attribute value between 0 and 1 for each of a plurality of pre-defined occupation attributes to each of said occupations in said region;
- wherein said software implemented tool assigns an occupation vector in multi-dimensional space to each of said occupations based on said occupation attribute values corresponding to each of said occupations;
- wherein said software implemented tool assigns an occupation attribute value between 0 and 1 for each of said plurality of pre-defined occupation attributes to said user's current or most recent occupational position;
- wherein said software implemented tool assigns a position vector in multi-dimensional space to said user's current or most recent occupational position based on said occupation attribute values corresponding to each of said occupations;

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pation attribute values corresponding to said user's current or most recent occupational position;
 wherein said software implemented tool computes the angular cosine distance between said position vector and each of said occupation vectors utilizing a cosine distance formula;
 wherein said software implemented tool classifies each of said occupations as an "able" occupation if the angular cosine distance between the occupation vector corresponding to said occupation and the position vector corresponding to said occupational position is less than or equal to a pre-determined threshold; and
 wherein said software implemented tool classifies each of said occupations as an "not able" occupation if the angular cosine distance between the occupation vector corresponding to said occupation and the position vector corresponding to said occupational position is greater than a pre-determined threshold.

5. The information system of claim 4 wherein said graphical user interface proportionally spaces said occupations in a user readable format on said chart to indicate the relative similarity of occupations based on said angular cosine distance calculations.

6. The information system of claim 4 wherein said graphical user interface proportionally spaces said occupations in a user readable format on said chart to indicate the relative salaries of occupations.

7. The information system of claim 4 wherein said pre-defined occupation attributes are selected from the group consisting of: abilities, knowledge, skills, interests, tasks, and work activities.

8. The information system of claim 4 wherein said cosine distance formula comprises a dampening function.

9. The information system of claim 8 wherein said dampening function is a logarithmic function.

10. The information system of claim 2 wherein said graphical user interface groups similar occupations together into an occupation family.

11. A method for electronically estimating from a relational database whether a region has enough unemployed workers with skills suitable to fill a firm's employment needs and displaying the estimation in a user readable format comprising the steps of:

- a) determining the number of new employees needed by a firm;
- b) determining the occupational position required for each of said needed new employees;
- c) determining the number of unemployed workers in a region;
- d) determining the occupation of each of said unemployed workers;
- e) determining which unemployed workers have occupations similar to said required occupational positions of said firm; and
- f) displaying a report in a user readable format indicating the number and occupation of unemployed workers in a region with skills suitable to fill said firm's employment needs, wherein step e comprises:

defining a plurality of occupation attributes;

assigning an occupation attribute value between 0 and 1 for each of said occupation attributes to each of said required occupational positions of said firm;

assigning a position vector to each of said required occupational positions;

wherein said position vector is a vector in multi-dimensional space according to each of said occupation attribute values of said occupational position;

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assigning an occupation attribute value between 0 and 1 for each of said occupation attributes to each of said occupations of said unemployed workers;

assigning an occupation vector to each of said occupations; wherein said occupation vector is a vector in multi-dimensional space according to each of said occupation attribute values of said occupation;

computing the angular cosine distance between every position vector and every occupation vector utilizing a cosine distance formula; and

classifying the occupation of an unemployed worker as suitable to fill said firm's employment needs if the angular cosine distance between the occupation vector corresponding to said occupation and one of said position vectors is less than a pre-determined threshold.

12. The method of claim 11 wherein said occupation attributes are selected from the group consisting of: abilities, knowledge, skills, interests, tasks, and work activities.

13. The method of claim 11 wherein said cosine distance formula comprises a dampening function.

14. The method of claim 13 wherein said dampening function is a logarithmic function.

15. The method of claim 11 wherein similar occupations are grouped together into an occupation family.

16. A method for electronically analyzing from a relational database related occupations in a region for their appeal as a career-change option comprising the steps of:

- a) determining the occupations in said region;
- b) determining the salary of each of said occupations;
- c) determining whether each of said salaries is at or above a pre-defined percentage of a user's current or most recent salary; and
- d) determining whether each of said occupations is similar to a user's current or most recent occupational position,

wherein step d comprises:

defining a plurality of occupation attributes;

assigning an occupation attribute value between 0 and 1 for each of said occupation attributes to each of said occupations in said region;

assigning a position vector to each of said occupations;

wherein said position vector is a vector in multi-dimensional space according to each of said occupation attribute values of said occupations;

assigning an occupation attribute value between 0 and 1 for each of said occupation attributes to said user's current or most recent occupational position;

assigning a position vector to said occupational position; wherein said position vector is a vector in multi-dimensional space according to each of said occupation attribute values of said occupational position;

computing the angular cosine distance between said position vector and each of said occupation vectors utilizing a cosine distance formula; and

classifying each of said occupations as similar to said user's current or most recent occupational position if the angular cosine distance between the occupation vector corresponding to said occupation and said occupational position vector is less than a pre-determined threshold.

17. The method of claim 16 wherein said occupation attributes are selected from the group consisting of: abilities, knowledge, skills, interests, tasks, and work activities.

18. The method of claim 16 wherein said cosine distance formula comprises a dampening function.

19. The method of claim 18 wherein said dampening function is a logarithmic function.

20. The method of claim 19 wherein similar occupations are grouped together into an occupation family.

* * * * *

EXHIBIT B



*Developing a "Strategic Compass" Template for Workforce
and Economic Strategic Planning*

Prepared for:

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September 13, 2006

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Principal Economist : Christine Chmura, Ph.D., President and Chief Economist

Project Title : Developing a "Strategic Compass" Template for Workforce and Economic Strategic Planning



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September 13, 2006

Teresa C. Chasteen, Ph.D.
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Toll free: 888-717-9461 ext. 2207

Dear Teresa,

Ref: Developing a "Strategic Compass" Template for Workforce and Economic Development Strategic Planning

Dear Teresa,

Chmura Economics & Analytics (CEA) is pleased to provide WIN with a proposal to develop a blueprint template for workforce and economic development strategic planning.

Attached is a statement of work including scope, approach, and pricing for your review. JobsEQ™ (under the WIN brand) serves as the foundation of the solution we propose. The strategic compass will be 'powered by JobsEQ® in the form of a 'template' that will allow users to track the progress of their region over time relative to specific goals.

Thank you, Teresa, for your interest in CEA products and services. We are looking forward to this potential opportunity to work with you. Please call or e-mail if you need additional information. My contact details are 804-649-1107 (office) and 804-512-7437 (mobile) or leslie.peterson@chmuraecon.com.

Sincerely,

Leslie Peterson
Director of Operations, Partner



Background

Worldwide Interactive Network (WIN) clients in workforce, economic development, and education need a systematic process for measuring their human capital development and regional economic trends. For that reason, Chmura Economics & Analytics (CEA) has been asked to develop a web-based tool for assessing and aligning workforce indicators with regional economic trends. The analysis will tie the trends in the regional economies to the occupations and skills characteristic of these localities. From this analysis, local workforce, economic developers, and educators can strategically plan to continuously strengthen and sustain economic development by aligning workforce policies toward meeting the current and forecasted demands of the business communities within these regions.

To move to a 'blueprint' that will be seamless and effective will take changes in public attitudes, passions, and policy. Changing the workforce system in a generation will require systemic and systematic changes in every area of public policy impacting human capital. "Systemic" in that the changes must alter how capital and income streams flow within and through the system; "systematic" in that to really work, the changes must compliment and reinforce each other to create momentum that is greater than that of a single policy reform or new program.

In order to know how to design the blueprint for economic and workforce development, a comprehensive but easy-to-use database is required to show the relationships between human capital and economic health. CEAs proprietary JobsEQ® will be used to identify issues such as the current and future gaps between worker skills and the skills demanded by employers to help localities understand what is needed in the short-term as well as to prepare for the future.

This document explains the CEA approach toward providing gap information in a meaningful way to WIN clients. From this analysis, WIN clients can refresh their thinking in two areas: the mix of policies required to bring about fundamental change in the performance of the workforce investment, education and economic development systems and second, what it will take politically for such substantive changes to occur. In this manner, WIN clients can collaborate with its partners to change the entire system as opposed to making small islands of change.



The Big Picture

CEA will provide an analysis of the regional economies in terms of current and forecasted growth while benchmarking the economic growth to the skills of the workforce. From this baseline, CEA can determine where the gaps are within the regions fastest changing industries as well as targeted industries and clusters. Industry cluster and sector strategies make it possible to focus on key regional industries. By bringing workforce, education and the economy together under a set of macro and micro indicators, clients are able to see policy and program reforms as they relate to:

- Economic development challenges such as global competition, labor market outsourcing, critical skills shortages, aging workforce and linking to local economic and education initiatives and strategies. Cluster strategies foster innovation and competitive advantage in global markets by focusing attention on key industries and information about their needs.
- Workforce development issues such as serving low-income workers and sustaining middle-income occupations; skill levels that do not meet businesses needs; poor quality across industries and occupations. Cluster-based strategies can help create new jobs and new opportunities by promoting education and training programs, developing career ladders, and moving the human capital 'meter' toward higher skills to help employers grow and prosper.
- Resource concerns that improve flexibility and responsiveness to benefit businesses and employees. Cluster-based strategies allow workforce, education, and economic development practitioners to form seamless strategies making it possible to work across individually funded programs and focus priorities in the same strategic direction.

Objectives

The objective of the analysis is to capture the essence of how each region in a given state is currently poised to underpin economic development efforts that lead to job creation for the region. The product will be created in a 'template' that is portable to any region in the United States. The overarching goals for the product are to determine the strengths and weaknesses for the local economies as they relate to:

1. Increasing the numbers of total jobs,
2. Increasing the concentration of demand-driven, better-paying jobs, and
3. Addressing the needs for future jobs based on forecasted future economic growth and targeted industries and industry clusters.



Attention will be directed to the major design principles for the creation of a balanced scorecard for measuring the effectiveness of key strategies. Emphasis will be placed on accountability measures for managing dimensions of change.

Deliverables

CEA will meet the needs of WIN clients through the following three deliverables:

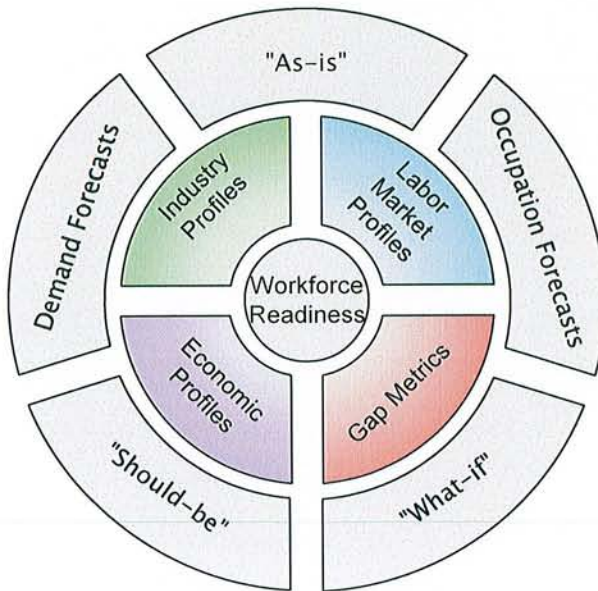
1. JobsEQ®. CEAs proprietary web-based software will server as the basis of the data needed for analysis. It will be created with the WINs brand-image with all web pages noted as "Powered by JobsEQ™."
2. Strategic planning. Data from JobsEQ™ as well as current strategies of the regions and state will be used to identify the drivers of growth that will be tracked in the strategic compass.
3. Strategic compass. The strategic compass will be added to JobsEQ™ in the form of a template that will allow users to track the progress of their region over time relative to specific goals.

The regional analysis provided by CEA will include the following for each region:

- Industry cluster analysis
 - Earnings by job
 - Alternative occupations
 - Career training ladders (to include WIN Work Keys data)
- Occupation cluster analysis
- Demand occupations
 - In-depth sector analysis
- Labor supply to meet demand occupations
- Gaps
- Willing & Able job matches
- Education supply and demand by instructional programs
- Academic performance indicators
- Education gaps
- Skills analysis
- Demographic trend analysis
- The emerging workforce
- Total wealth
 - Wages and salaries
 - Poverty
- Fastest growing industries (current and forecast)
- Fastest declining industries (current and forecast)



The data provided will allow clients to compare the 'as is' workforce to the 'should be' workforce based on supply shortages and surpluses in degrees, knowledge, skills and abilities.



The WIN Strategic Compass will address 3 major questions:

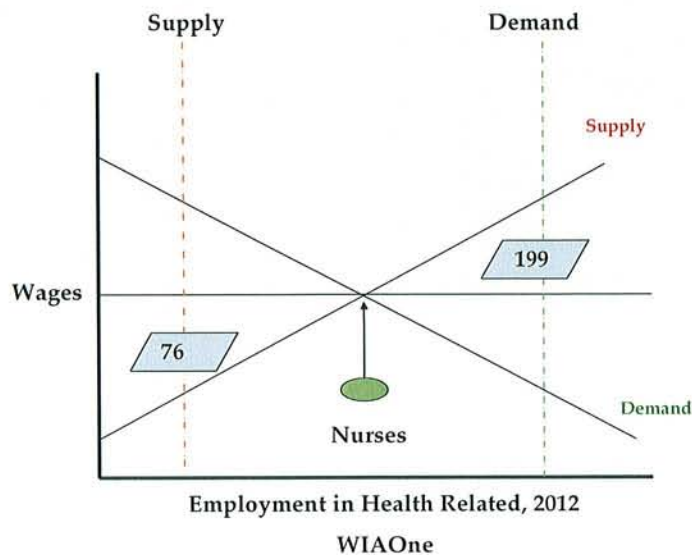
- 1. Are we adding more jobs?*
- 2. Are we adding better jobs?*
- 3. Are we poised for future jobs that create wealth?*

CEA Approach

CEA understands this analysis will provide analytics pointing non-economists toward greater understanding of the trends of the local workforce for the study region and will have the practical outcome of increasing growth.

CEA uses a method whereby occupations are modeled according to supply and demand of jobs and skills. For example, the chart below shows that the demand for more registered nurses in WIA 1 will be 199 above the current levels in 2012 while the supply of new nurses expected in the region over the same period will only total 76. If policies do not change to encourage more students into nursing (or encourage more nurses to stay in the field longer) then shortages will lead to higher wages and/or lower quality service.





The WIN Strategic Compass

A discovery process will be used with WIN and their clients to determine the critical tools needed on the strategic compass dashboard. This process will occur after the region is analyzed based on JobsEQ® outputs. Each dashboard will have drill down capabilities to granulate the relative data sets for trend and gap analysis. The Strategic Compass will have the capability to display relational data in a manner that 'tells' the users it is necessary to update their strategic plans to allow for shifts in underlying data supporting their current targets and goals.

Users of the strategic compass will be process owners from economic, workforce, and education development. Users will be able to link local initiatives to state and federal initiatives. Linking strategies can be designed for local, WIA, state, and federal regions.

CEA staff will work with WIN to determine the vision, mission, and strategic intent for WIN clients using the Strategic Compass. The Strategic Compass will allow users to implement Malcolm Baldrige principles into their work flows.

Professional Arrangements



Leslie Peterson, Director of Operations, Partner, will assume overall responsibility for the process, the pricing,¹ and final products delivered to WIN for this analysis. Christine Chmura, PhD and Chief Economist will oversee the analysis and serve as Chief Economist for this assignment. It is understood and agreed that the client will provide all reasonable support to help CEA achieve a successful project completion within the targeted timeframe. This support is expected to include the following:

- ✓ Timely feedback² regarding the initial outputs and trends
- ✓ Work Keys (WIN) data in electronic format
- ✓ Program and administration budget data for each of the 'user groups'
- ✓ Active participation to facilitate the resolution of project-related issues

WIN brand powered by JobsEQ® is expected to be completed within 1 month after the receipt of a signed contract and a 30% retainer. The Strategic Compass is expected to be commercially viable within 6 months.

CEA professional fees for this project are based upon the amount of time estimated to complete the project at the standard billing rates for the individuals assigned. The cost of 1 formal presentation is included in the price below:³

¹ CEA does not make price information available to our employees. Please limit any pricing discussions to the Director of Operations.

² WIN should assist CEA with de-bottlenecking issues associated with the cycle times of the project.

³ Price does not reflect travel accommodations.



Total Price

Chmura Economics & Analytics

Discounted Daily Rate for Additional Presentations[§]

Chris Chmura	\$	1,200.00
Leslie Peterson	\$	1,000.00
John Chmura	\$	800.00

WIN powered by JobsEQ®

<i>States^{§§}</i>	<i>2 Users</i>	<i>Additional User^{§§§}</i>
Base	\$ 75,000.00	\$ 4,995.00

WIN Strategic Compass powered by JobsEQ®

	<i>2 Users</i>	<i>Additional User</i>
Base	\$ 150,000.00	\$ 2,000.00
New State Added	65,000.00	\$ 2,000.00

[§] does not include travel expenses

^{§§} includes access to all counties in the state

^{§§§} 15% discount when purchased in blocks of 5

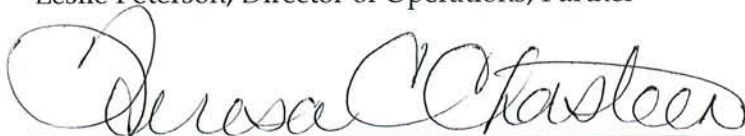
The below signatures are required to execute this contract between CEA and WIN
If the approach outlined in this statement of work is acceptable to WIN, please sign below and return it to me at your earliest convenience. CEA requires a 30% retainer to initiate the Strategic Compass.



September 13, 2006

Leslie Peterson, Director of Operations, Partner

(date)



Teresa C. Chasteen, Ph.D., President, WIN

9/14/2006
(date)



Use and Disclosure of Content

The content of this proposal shall not be disclosed and shall not be duplicated, used, stored in any retrieval system, transmitted in any form or discussed in whole or in part for any purpose other than to evaluate the deliverables and capabilities of CEA; provided, that if either a subsequent contract is awarded to CEA or Terms of Agreement are defined with CEA as a result of or in connection with the submission of this proposal for work, W-WIN shall not have the right to duplicate, use, or disclose the content to a competitor to CEA. This restriction does not limit the right to use information contained in the proposal if it is available from another source without restriction. Use or disclosure of the proposal is subject to the restriction on the title page of this report.



EXHIBIT C

Chmura Economics & Analytics



1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
3/28/2009	1287

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
South Carolina Statewide Government Client Enterprise Agency License, 2nd Year, Period: November 1, 2008 - October 31, 2009. Payment for April 2009 Late Fees		11,585.08	11,585.08
		1,216.43	1,216.43
<div style="transform: rotate(-45deg); font-size: 2em; font-family: cursive;">overnight for me 10 am</div> <div style="text-align: center;">  </div>		<div style="text-align: center;">  </div>	
Total			\$12,801.51
Payments/Credits			\$0.00
Balance Due			\$12,801.51

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
2/27/2009	1277

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

		P.O. No.	Terms	Project
			Due Upon Receipt	
Description	Qty	Rate		Amount
South Carolina Statewide Government Client Enterprise Agency License, 2nd Year, Period: November 1, 2008 - October 31, 2009.		11,585.08		11,585.08
Payment for March 2009				
Late Fees		1,390.21		1,390.21
<div>RECEIVED</div> <div>MAR 02 2009</div> <div>BY: _____</div> <div>over night check!</div> <div>approved for 3/2/09</div>		<div>PAID</div> <div>3/2/09</div> <div>CHK# 20233</div> <div>ENTERED</div>		
		Total		\$12,975.29
		Payments/Credits		\$0.00
		Balance Due		\$12,975.29


Chmura Economics & Analytics
 1309 East Cary Street, Lower Level
 Richmond, VA 23219

Invoice

Date	Invoice #
2/2/2009	1263

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
South Carolina Statewide Government Client Enterprise Agency License, 2nd Year, Period: *****Payment for February 2009***** Half of Late fees typically charged.		11,585.08	11,585.08
		782.00	782.00
<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> <p><i>Overnight check</i></p> <p>PAID <i>2/3/09</i> <i>CK# 20108</i></p> </div> <div style="width: 40%; text-align: center;">  <p>ENTERED</p> </div> </div>			
		Total	\$12,367.08
		Payments/Credits	\$0.00
		Balance Due	\$12,367.08

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
12/1/2008	1251

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.		Terms	Project
		Due Upon Receipt	
Description	Qty	Rate	Amount
South Carolina Statewide Government Client Enterprise Agency License, 2nd Year, Period: November 1, 2008 - October 31, 2009. Annual Rate \$139,021 less payment of \$23,170.17. Late fee for month ending with January 1, 2009	\$11,686.08	115,850.83	115,850.83
1/10th		1.50%	1,737.76
1/2 of late fee	\$808.88		
cover letter overnight			
PAID 1/9/09 CK# 20006			
		Total	\$117,588.59
		Payments/Credits	\$0.00
		Balance Due	\$117,588.59



ENTERED

= \$12,453.96

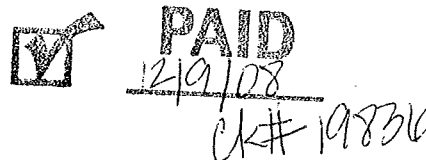
Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219


Invoice

Date	Invoice #
12/1/2008	1251

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

PAID
12/19/08
ck# 19836

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
South Carolina Statewide Government Client Enterprise Agency License, 2nd Year, Period: November 1, 2008 - October 31, 2009.		139,021.00	139,021.00
			
Total			\$139,021.00

11 585.06 x 2 = \$23,170.17

Payments/Credits \$0.00

Balance Due \$139,021.00

Chmura Economics & Analytics


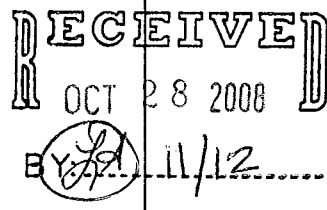
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
10/27/2008	1240

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Training for JobsEQ at Harriman, TN (delivered by Chris Chmura)		1,200.00	1,200.00
Mileage from Harriman to Richmond	949.2	0.505	479.35
Hotel (invoice sent separately)		107.63	107.63
<div style="display: flex; justify-content: space-between;"> <div>  </div> <div>  </div> </div>			
Total			\$1,786.98
Payments/Credits			\$0.00
Balance Due			\$1,786.98 \$1,786.98

see approval w/
attachment

\$1862.91



10-22-08

Chris Chamura 1309 E Cary St Richmond, VA 23219-4153 US	Folio No.	:		Room No.	:	128
	A/R Number	:		Arrival	:	10-21-08
	Group Code	:		Departure	:	10-22-08
	Company	:		Conf. No.	:	60981935
	Membership No.	:	PC 435742293	Rate Code	:	IGCOR
	Invoice No.	:		Page No.	:	1 of 1

Date	Description	Charges	Credits
10-21-08	*Accommodation	94.00	
10-21-08	State Tax - Room 9.5%	8.93	
10-21-08	City Tax - Room 5.0%	4.70	
Thank you for staying at Holiday Inn Express Hotel & Suites Harriman. Qualifying points for this stay will automatically be credited to your account. To make additional reservations online, update your account information or view your statement please visit www.priorityclub.com. We look forward to welcoming you back soon.		Total	107.63
		Balance	107.63

Guest Signature: _____
 I have received the goods and / or services in the amount shown heron. I agree that my liability for this bill is not waived and agree to be held personally liable in the event that the indicated person, company, or associate fails to pay for any part or the full amount of these charges. If a credit card charge, I further agree to perform the obligations set forth in the cardholder's agreement with the Issuer.

HOLIDAY INN EXPRESS HOTEL & SUITES HARRIMAN
 1885 SOUTH ROANE STREET
 HARRIMAN, TN 37748
 Telephone: (865) 295-0001 Fax: (865) 295-0011

Chmura Economics & Analytics

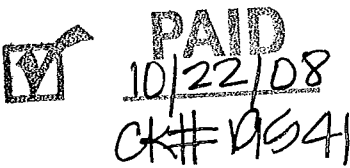

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
10/10/2008	1233

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Health Sciences Report, TN		670.00	670.00
			
Total			\$670.00
Payments/Credits			\$0.00
Balance Due			\$670.00

*approval
by Teresa via
email confirm.*

RECEIVED
OCT 13 2008



Chmura Economics & Analytics
 1309 East Cary Street, Lower Level
 Richmond, VA 23219

Invoice

Date	Invoice #
9/15/2008	1220

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
WIB Pak for WIA 4 in Tennessee	1	9,995.00	9,995.00
Three custom regions related to the above WIB Pak	3	1,000.00	3,000.00
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 10px; text-align: center;"> APPROVED SEP 17 2008 TERESA CHASTEEN PRESIDENT </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  ENTERED </div> </div>			
Total			\$12,995.00
Payments/Credits			\$0.00
Balance Due			\$12,995.00

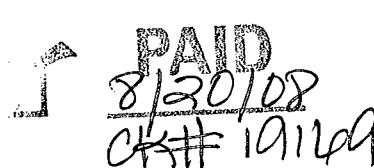

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
7/22/2008	1202

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

		P.O. No.	Terms	Project
			Due Upon Receipt	
Description	Qty	Rate		Amount
WIB Pack (2 workforce investment board users, 2 economic development users, 6 case managers, 300 active clients where case managers and active clients have limited analytics; workforce investment board and economic development users have full analytics) for Mobile Alabama. Start date: July 25, 2008.		9,995.00		9,995.00
				
Federal Identification Number is 54-1923150			Total	\$9,995.00
			Payments/Credits	\$0.00
			Balance Due	\$9,995.00

OK per TC
AE

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
8/5/2008	1209

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
IT Support for WIN's Skills Bank Application, June 18 - August 5 2008	100	0.67	67.00
<div>PAID 8/11/08 CK# 19105</div> <div>ENTERED</div> <div>APPROVED AUG - 9 2008 TERESA CHASTEEN PRESIDENT</div> <div>TC emailed approval on 8/9/08</div>			
Total			\$67.00
Payments/Credits			\$0.00
Balance Due			\$67.00

Chrnura Economics & Analytics

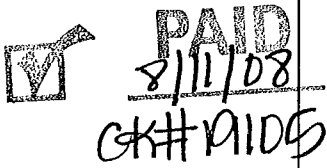
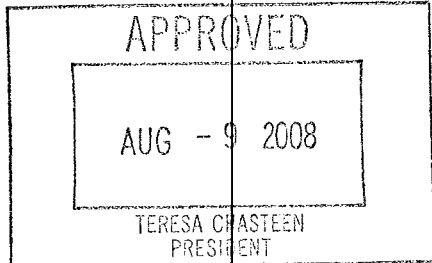

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
8/5/2008	1211

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Training for JobsEQ at Mobile Alabama (delivered by Chris Chmura)		1,200.00	1,200.00
Airline ticket plus 1 bag		576.00	576.00
Hotel and food (receipts will be sent in a separate e-mail)		244.96	244.96
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>ENTERED</p> </div> </div> <div style="margin-top: 20px;"> <p><i>TC emailed approval on 8/19/08</i></p> </div>			
Federal Identification Number is 54-1923150			<p>Total \$2,020.96</p> <p>Payments/Credits \$0.00</p> <p>Balance Due \$2,020.96</p>



RENAISSANCE.
HOTELS & RESORTS

RENAISSANCE RIVERVIEW PLAZA

GUEST FOLIO

2502 CHMURA/CHRISTINE 169.00 DUPLICATE 7:56 ACCT#
ROOM NAME RATE DEPART TIME 7713
CNK CHMURA ECONOMICS & A 07/24/08
TYPE ARRIVE TIME
ROOM 1309 EAST CARY STREE
CLERK RICHMOND VA
23219
ADDRESS PAYMENT XXXXXXXXXXXXXXX2009

DATE	REFERENCE	CHARGES	CREDITS	BALANCE DUE
07/24	RM SRVCE 66672502	40.95		
07/24	ROOM 2502, 1	169.00		
07/24	RM TAX 2502, 1	23.66		
07/25	CCARD-AX		233.61	
	XXXXXXXXXXXX2009			

.00



RENAISSANCE.
HOTELS & RESORTS

This statement is your only receipt. You have agreed to pay in cash or by approved personal check or to authorize us to charge your credit card for all amounts charged to you. The amount shown in the credits column opposite any credit card entry in the reference column above will be charged to the credit card number set forth above. (The credit card company will bill in the usual manner.) If for any reason the credit card company does not make payment on this account, you will owe us such amount. If you are direct billed, in the event payment is not made within 25 days after check-out, you will owe us interest from the check-out date on any unpaid amount at the rate of 1.5% per month (ANNUAL RATE 18%), or the maximum allowed by law, plus the reasonable cost of collection, including attorney fees.

Signature X _____

Riverview Plaza Hotel
64 South Water Street
Mobile, AL 36602
251.438.4000
Fathoms Lounge
CHECK: 2935
GST CHKID: 11
SERVER: 24 VICTOR
DATE: JUL25'08 6:58AM
CARD TYPE: American Express
ACCT #: XXXXXXXXXXXX2009
EXP DATE: XX/XX
AUTH CODE: 529341
RESEARCH: 000000000000
CHRISTINE CHMURA

SUBTOTAL: 7.15

Gratuity: _____

TOTAL: _____

x _____
I agree to pay the above amount
in accordance with card holder
agreement.

DNC TRAVEL HOSPITALITY SVCS
RICHMOND INTERNATIONAL AIRPORT
EDY'S ICE CREAM/CARIBOU COFFEE
CHECK: 6576
SERVER: 1053 L. ONEAL
DATE: JUL24'08 2:43PM
CARD TYPE: AMEX
ACCT #: XXXXXXXXXXXX2009
EXP DATE: XX/XX
AUTH CODE: 533336
CHRISTINE CHMURA

TOTAL: 4.20

TIP \$ _____

TOTAL \$ _____

SIGNATURE
SIGN ONE COPY AND RETURN
*** THANK YOU ***

Chris Chmura

From: travel@expedia.com
Sent: Tuesday, July 15, 2008 10:43 PM
To: chris@chmuraecon.com
Subject: Expedia travel confirmation - Mobile, AL - Jul 24, 2008 - (Itin# 124458453865)

Travel Confirmation

Thank you for booking your trip with Expedia. This email is your receipt for the travel item(s) you just booked; a complete itinerary that includes all applicable ticket numbers, reservation IDs, etc. will follow in the next 4 days.

Remember that you can always [view your itinerary online](#) for the most up-to-date information. Our [interactive demo](#) can show you how easy it is to get information about your itinerary.



Did you know about all the ways you can earn ThankYou Points on Expedia?

Although this itinerary doesn't qualify for ThankYou Points, you can still earn points if you add a hotel booking today or any time before you travel.

[Learn more](#) about how to earn points for future bookings.

Your ticket purchase has not been confirmed by the airline. Please check your complete itinerary after 24 hours have passed for ticket confirmation information.

Total ticket cost:	\$514.99
Taxes & Fees:	\$46.01
Airfare total:	\$561.00

Flight: Richmond to Mobile

Traveler name: Christine Chmura

Richmond (RIC) to Charlotte (CLT)	7/24/08	2:40 pm - 3:55 pm	US Airways Operated By: US AIRWAYS EXPRESS-MESA AIRLINES
Charlotte (CLT) to Mobile (MOB)	7/24/08	5:40 pm - 6:15 pm	US Airways Operated By: US AIRWAYS EXPRESS-PSA AIRLINES
Mobile (MOB) to Atlanta (ATL)	7/25/08	5:00 pm - 7:16 pm	Delta Operated By: ATLANTIC SOUTHEAST
Atlanta (ATL) to Richmond (RIC)	7/25/08	8:07 pm - 9:45 pm	Delta Operated By: ATLANTIC SOUTHEAST



[View your itinerary](#) for complete and up-to-date trip details, or to make changes online.

Customer Support

Itinerary number: 124458453865

If you have questions about your reservation, fill out our [itinerary assistance form](#). We'll respond within 24 hours: For immediate assistance call Expedia at 1-800-EXPEDIA (1-800-397-3342) or 1-404-728-8787 and have the itinerary number ready.

What else can we help you with?

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
6/17/2008	1192

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
<p>Debug work values assessment problems & Fix mail merge timeout in June</p> <p>Final billing in light of end to contract based on e-mail from T. Chasteen on 6/17/08</p> <div data-bbox="115 1344 534 1608" data-label="Image"> </div>	2.2	100.00	220.00



PAID
7/17/08
CK# 18953



ENTERED

Federal Identification Number is 54-1923150

Total	\$220.00
Payments/Credits	\$0.00
Balance Due	\$220.00

Chmura Economics & Analytics
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
5/29/2008	1177

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

Description	Qty	P.O. No.	Terms	Project
			Due Upon Receipt	
Chris Chmura Presentation to Albany, NY group Airline Ticket			1,200.00 1,255.50	1,200.00 1,255.50 ✓
<div>APPROVED MAY 30 2008 TERESA CHASTEEN PRESIDENT</div> <div>ENTERED</div>		<div>PAID 6/2/08 CK# 18047</div>		
		Total \$2,455.50		
		Payments/Credits \$0.00		
		Balance Due \$2,455.50		

Chmura Economics & Analytics
 1309 East Cary Street, Lower Level
 Richmond, VA 23219

Invoice

Date	Invoice #
3/31/2008	1148

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
IT Support for WIN's Skills Bank Application, March 2008	19.51	100.00	1,951.00
<div data-bbox="224 1192 316 1270"></div> <div data-bbox="341 1182 565 1323"> PAID 04/03/08 CR#18238 </div> <div data-bbox="162 1354 587 1617"> <div>APPROVED</div> <div>APR - 1 2008</div> <div>TERESA CHASTEEN PRESIDENT</div> </div>			
Total			\$1,951.00
Payments/Credits			\$0.00
Balance Due			\$1,951.00

ENTERED

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
3/21/2008	1142

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Strategic Compass Training by Chris Chmura on Location, Kingston Tennessee, 2/15/08		1,200.00	1,200.00
Mileage to Kingston, TN from Richmond, VA	934	0.505	471.67
<div>APPROVED MAR 24 2008 TERESA CHASTEEN PRESIDENT</div> <div>PAID 3/25/08 CHK # 18168</div>			
Total			\$1,671.67
Payments/Credits			\$0.00
Balance Due			\$1,671.67

 ENTERED

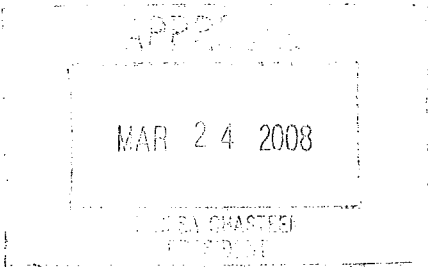

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
3/21/2008	1141

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

		P.O. No.	Terms	Project
			Due Upon Receipt	
Description	Qty	Rate		Amount
Virtual Strategic Compass Training See accompanying document for dates and attendees	16.5	65.00		1,072.50
				
			Total	\$1,072.50
			Payments/Credits	\$0.00
			Balance Due	\$1,072.50



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1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

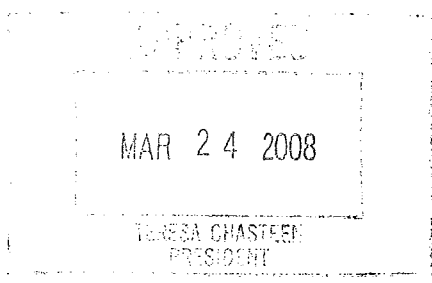
3/1/08

?

Date	Invoice #
12/20/2007	1106

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
South Carolina-based Training for the WIN Strategic	1	800.00	800.00
Compass--Greg Chmura	1	549.09	549.09
Airfare	1	16.20	16.20
Airport Parking	1	198.69	198.69
Hotel Marriott 12/10/2007	1	15.67	15.67
Meals--Marriott--12/10/2007	1	7.27	7.27
Meals--State Museum--12/10/2007	1	9.17	9.17
Meals--Columbia Airport--12/10/2007	1	65.00	585.00
Greg Chmura's Web-based Training with Katherine DeRosear and WIN customers	9		
<div style="display: flex; justify-content: space-between; align-items: center;"> <div>  <p>MAR 24 2008</p> <p>TERESA CHASTEEN PRESIDENT</p> </div> <div> <p>\$32.11</p> <p>PAID 3/25/08 CHK #18108</p> </div> </div>			
Federal Identification Number is 54-1923150		Total	\$2,181.09
		Payments/Credits	\$0.00
		Balance Due	\$2,181.09



Chmura Economics & Analytics


1309 East Cary Street, Lower Level
Richmond, VA 23219

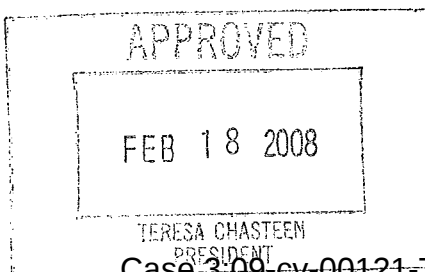
Invoice

Date	Invoice #
2/17/2008	1129

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
SC Maintenance completed on 1/18 (moved map to front page, changed permissions needed for woke import)		275.00	275.00
FL modifications completed on 2/4 (rename mailmerge fields)		100.00	100.00
FL data fix script completed on 2/7		275.00	275.00
FL stipend report changes completed on 2/9		1,200.00	1,200.00
FL SSN data fix script completed on 2/11		200.00	200.00
<p>South Carolina — \$ 275.00</p> <p>Florida — \$ 1775.00</p> <p> ENTERED</p>			
Total			\$2,050.00
Payments/Credits			\$0.00
Balance Due			\$2,050.00



PAID
02/19/08
CK# 17935

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
1/7/2008	1108

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Final payment of 1st year of a 3-year contract for the 'enterprise statewide agency use' for 100 seats at a price of \$139,021 per year. The 2007 payment of \$75,000 for SC Strategic Compass (JobsEQ) is applied against the total price.		64,021.00	64,021.00
<div data-bbox="168 1339 592 1604" data-label="Image"> </div>		<div data-bbox="574 1705 889 1822" data-label="Image"> </div>	
Total			\$64,021.00
Payments/Credits			\$0.00
Balance Due			\$64,021.00



PAID
01/21/08

CK#17739

Chmura Economics & Analytics

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Richmond, VA 23219

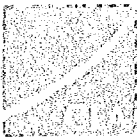
Invoice

Date	Invoice #
1/13/2008	1111

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

		P.O. No.	Terms	Project
			Due Upon Receipt	
Description	Qty	Rate		Amount
South Carolina Data Repair Scripts	1	250.00		250.00
South Carolina Maps	1	650.00		650.00
Alabama Job Link Interface	1	1,600.00		1,600.00
Alabama Certificate Signature Update	1	100.00		100.00
				</

<p>APPROVED</p> <p>JAN 14 2008</p> <p>TERESA CHASTEEN PRESIDENT</p>
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1309 East Cary Street, Lower Level
Richmond, VA 23219

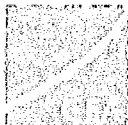
Invoice

Date	Invoice #
12/14/2007	1105

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

Description	Qty	P.O. No.	Terms	Project
			Due Upon Receipt	
Modifications to the South Carolina Skills Bank	1		1,500.00	1,500.00
<div>APPROVED DEC 17 2007 TERESA CHASTEEN PRESIDENT</div> <div></div>		12/17/07 OK to pay K.P.		
		PAID 12/19/07 CK# 17536		
		Federal Identification Number is 54-1923150		
		Total \$1,500.00		
		Payments/Credits \$0.00		
		Balance Due \$1,500.00		

ENTERED



Chmura Economics & Analytics
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

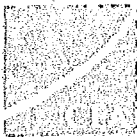
Date	Invoice #
12/10/2007	1103

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Enhancements to the Florida Skills Bank	1	950.00	950.00
<div>APPROVED DEC 17 2007 TERESA CHASTEEN PRESIDENT</div> <div>12/17/07 OK to pay K.P.</div> <div>PAID 12/19/07 CK# 17536</div>			
Federal Identification Number is 54-1923150		Total	\$950.00
		Payments/Credits	\$0.00
		Balance Due	\$950.00

ENTERED



Chmura Economics & Analytics
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
11/21/2007	1092

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Modifications to TN custom regions--WIN Strategic Compass Powered by JobsEQ PAID 11/28/07 CK 17407 ENTERED	1	650.00	650.00

Federal Identification Number is 54-1923150

Total	\$650.00
Payments/Credits	\$0.00
Balance Due	\$650.00

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1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

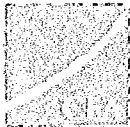
Date	Invoice #
8/30/2007	1058

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Remaining balance for the WIN Strategic Compass powered by JobsEQ licenses for South Carolina	0.7	75,000.00	52,500.00
<div>PAID</div> <div>10/24/07</div> <div>CK 17212</div> <div>ENTERED</div>			

Federal Identification Number is 54-1923150	Total	\$52,500.00
	Payments/Credits	\$0.00
	Balance Due	\$52,500.00



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Richmond, VA 23219

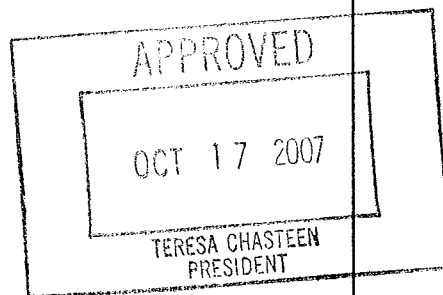
Invoice

Date	Invoice #
10/16/2007	1079

Bill To
WIN Katherine DeRosear

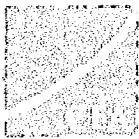
P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Final data requests supporting Georgia RFP for WIN	2	50.00	100.00
Federal Identification Number is 54-1923150		Total	\$100.00
		Payments/Credits	\$0.00
		Balance Due	\$100.00



PAID
10/18/07
CK 17176

ENTERED



Chmura Economics & Analytics
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
10/16/2007	1078

Bill To
WIN Katherine DeRosear

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Data preparation in support of Georgia RFP	21.26	50.00	1,063.00
<div><div>APPROVED OCT 17 2007 TERESA CHASTEEN PRESIDENT</div><div>PAID 10/18/07 CHK 17176</div></div>			

Federal Identification Number is 54-1923150

Total \$1,063.00

Payments/Credits \$0.00

Balance Due \$1,063.00

ENTERED

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
10/8/2007	1072

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

		P.O. No.	Terms	Project
			Due Upon Receipt	
Description	Qty	Rate		Amount
WIB Pack for customized region in Tennessee (\$4995 paid on 9/19/07 for invoice 1058 dated 8/30/07)	1			0.00
3 Customized Regions	3	2,000.00		6,000.00
<div data-bbox="527 1144 1006 1512" data-label="Text"> <p>APPROVED OCT 11 2007 TERESA CHASTEEN PRESIDENT</p> </div> <div data-bbox="406 1533 730 1659" data-label="Text"> <p>ENTERED</p> </div>		<div data-bbox="1136 1249 1445 1480" data-label="Text"> <p>PAID 10/16/07 CK 17159</p> </div>		
Federal Identification Number is 54-1923150			Total	\$6,000.00
			Payments/Credits	\$0.00
			Balance Due	\$6,000.00

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
9/10/2007	1061

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

Description	Qty	Rate	Amount	P.O. No.	Terms	Project
					Due Upon Receipt	
South Carolina CRC Delivered 8/24/07 Florida Workkeys Import Feature Delivered 8/31/07		7,500.00 900.00	7,500.00 900.00			
<div>APPROVED OCT 4 2007 TERESA CHASTEEN PRESIDENT</div> <div>PAID 10/15/07 CK-17081</div> <div>ENTERED</div>				Federal Identification Number is 54-1923150		
				Total \$8,400.00		
				Payments/Credits \$0.00		
Balance Due \$8,400.00						

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
8/30/2007	1059

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Demonstration Discounted Price for TN WIA 4	1	4,995.00	4,995.00
<div>APPROVED SEP 4 2007 TERESA CHASTEEN PRESIDENT</div> <div>PAID CK 16927 9/14/07</div> <div>ENTERED</div>			

Federal Identification Number is 54-1923150

Total \$4,995.00**Payments/Credits** \$0.00**Balance Due** \$4,995.00

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
8/6/2007	1054

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

PAID

9/6/07 CK 16897

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Development and deployment of the Florida CRC database	1	9,000.00	9,000.00
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 10px; text-align: center;"> APPROVED AUG 7 2007 TERESA CHASTEEN PRESIDENT </div> <div style="border: 1px solid black; padding: 10px; text-align: center;"> APPROVED SEP 5 2007 TERESA CHASTEEN PRESIDENT </div> </div> <p style="margin-top: 20px; text-align: right;">Per Kali Phillips</p>			

Federal Identification Number is 54-1923150

Total	\$9,000.00
Payments/Credits	\$0.00
Balance Due	\$9,000.00

ENTERED

Chmura Economics & Analytics


1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
7/12/2007	1050

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Strategic Compass Training in Columbia SC: Chris Reimbursement for travel costs (777 miles + hotel + meal); receipts under separate cover		1,200.00 520.61	1,200.00 520.61
		PAID 7/17/07 \$1720.61 16604	
		Total	\$1,720.61

Payments/Credits	\$0.00
Balance Due	\$1,720.61

ENTERED

McDonald's Corporation
Thank you for eating at McDonald's

5028 HWY 264 WEST
WILSON, NC 27893

THANK YOU

MCDONALD'S TEL# (252)246-0287
38 KS#03 **S#1** Jul.09'07(Mon)17:12
STORE# 20917 MER# KB37466533001

Order #338 TO GO

1 CHICKEN CLUB-GRL 3.80
1 W/O
1 MED DIET COKE 1.30

SUB TOTAL 5.10
TAKE OUT TAX 0.34

5.44

CARD ISSUER ACCOUNT #
AMEX SALE *****2009
TRANSACTION AMOUNT 5.44
AUTH CODE 538318 SEQ# 6803

CASH TENDERED 0.00

CHANGE 0.00

Sunoco #2625

SUNOCO 2625
US-70 & I-95 EXIT 95
SMITHFIELD, NC 27577
Merchant#: H337419419001

07/10/07 17:25:02

PC DT MT DEW 1.39T
FL HONEY ROA 0.50T
FL OBERTO TE 5.99T

Subtotal 7.88
NC 6.75% 0.53
Total \$8.41
Credit Card(USD\$) \$8.41

Change \$0.00

XXXXXXXXXXXX2009
AMX
Trans# 070413 Approval# 550780
Card Total: \$8.41

*** Customer signature on file ***

Trans ID# 244083
e8s121t4

**Thank you for
Shopping Sunoco**



WINGATE INN
8300 TWO NOTCH ROAD

Jul 10, 2007
1:32 am

COLUMBIA, SC 29223
Phone: (803)699-9333 Fax: (803)699-6588

CHRIS CHMURA
1309 E CHERY ST
Richmond, VA 23219

Account #: 59801
Room Number: 320
Rate: \$117.04
Pay Method: XXXXXXXXXXXX2009 AX

Arrival Date: Monday, July 09, 2007
Departure Date: Tuesday, July 10, 2007

Member #:

Information: ADV 4P CXL/FULL READBACK

Date	Department	Reference	Voucher	Room	Debit	Credit
07/09/07	Room postings	Auto Posted		320	\$117.04	
07/09/07	STATE TAX	Auto Posted		320	\$7.02	
07/09/07	CITY TAX	Auto Posted		320	\$2.34	
07/09/07	DEVELOPMENT/TOL	Auto Posted		320	\$3.51	
07/10/07	AMERICAN EXPRES			320		\$129.91

As a TripRewards member, you could have earned 1,170 points for this stay.
To become a member visit us at triprewards.com or call 1-800-FOR-TRIP.

Tax Summary	
STATE TAX	\$7.02
CITY TAX	\$2.34
DEVELOPMENT	\$3.51

Balance: \$0.00

I agree that my liability for all charges is not waived. This property is independently owned and operated under license from Wingate Inn. Contact the Front Desk Manager about any billing issues.

Notice: This property maintains a NO PETS policy, with the exception of service animals.

Signature _____

Please contact the Manager about any issues with your stay.
Wingate Inn or affiliates may contact you about goods and services unless you call 877-333-6683 or write to Box 27970, Minneapolis, MN 55427-0870 to opt out.
View our Wingate Inn website about privacy.

Chmura Economics & Analytics

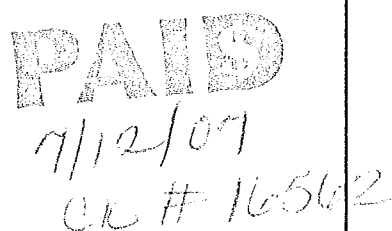
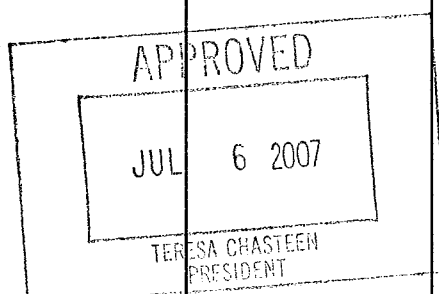

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
7/4/2007	1046

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Modifications to the Alabama CRC database	1	800.00	800.00
<div style="text-align: center;">    </div>			
Federal Identification Number is 54-1923150		Total	\$800.00
		Payments/Credits	\$0.00
		Balance Due	\$800.00

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
6/17/2007	1037

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
JobsEQ demos in Montgomery, AL; Columbia, SC; and Auburn, AL (June 12 - 14, 2007)	3	800.00	2,400.00
Travel reimbursements for hotel, transportation, and food (scanned invoices sent as separate e-mail)		1,254.48	1,254.48
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: left;"> <p>PAID 6/29/07 CK # 16495</p> <p>ENTERED</p> </div> <div style="text-align: center;"> <p>APPROVED JUN 16 2007 TERESA CHASTEEN PRESIDENT</p> </div> </div>			
Total			\$3,654.48
Payments/Credits			\$0.00
Balance Due			\$3,654.48

June 2007 Alabama Travel Expenses - Greg

Item	Amount	Total
Flight - Continental	\$ 312.80 ✓	
Car rental - Hertz	\$ 388.88 ✓	
Gas - Shell	\$ 30.55 ✓	
Transportation - Total		\$ 732.23
Hilton Mobile (2 days)	\$ 371.76 ✓	
Holiday Inn Auburn	\$ 101.70 ✓	
Lodging - Total		\$ 473.46
Starbucks	\$ 1.70 ✓	
McDonalds	\$ 1.29 ✓	
McAlisters (6/11)	\$ 11.31 ✓	
McAlisters (6/12)	\$ 10.74 ✓	
Ruby Tuesday	\$ 19.69 ✓	
Burger King	\$ 4.06 ✓	
Food - Total		\$ 48.79
GRAND TOTAL		\$ 1,254.48

✓
Invoice #
1037

Greg Chmura

From: Continental Airlines, Inc. [continentalairlines@continental.com]
Sent: Thursday, May 24, 2007 11:58 AM
To: GREG.CHMURA@CHMURAECON.COM
Subject: eTicket Itinerary and Receipt for Confirmation AQJ6ZK

To ensure delivery of this e-mail please add continentalairlines@continental.com to your address book or approved senders list. See [instructions](#) for adding us to your address book.

Continental Airlines   Confirmation: **Print your boarding pass**
AQJ6ZK at continental.com
within 24 hours of your flight 

Issue Date: May 24, 2007

Traveler **eTicket Number** **Frequent Flyer** **Seats**
CHMURA/GREGMR0052188056724 CO-FB734604 16A/15B

FLIGHT INFORMATION

Day, Date	FlightClass	Departure City and Time	Arrival City and Time	Aircraft	Meal
Mon, 11JUN07	2253 N	CLEVELAND (CLE) 9:05AM	NEW ORLEANS (MSY) 10:37AM	ERJ-145	

Thu, 14JUN07	2590 W	ATLANTA (ATL) 6:00PM	CLEVELAND (CLE) 8:00PM	ERJ-145	
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• Operated by EXPRESSJET AIRLINES INC doing business as CONTINENTAL EXPRESS
• Operated by EXPRESSJET AIRLINES INC doing business as CONTINENTAL EXPRESS

FARE INFORMATION

Fare Breakdown		Form of Payment:
Airfare:	271.63USD	DISCOVER
Tax:	20.37	Last Four Digits 5261
U.S. Flight Segment Tax:	6.80	
U.S. Security Service Fee:	5.00	
U.S. Passenger Facility Charge:	9.00	
Per Person Total:	312.80USD	

eTicket Total: **312.80USD**

The airfare you paid on this itinerary totals: 271.63 USD

The taxes you paid on this itinerary total: 41.17 USD

Fare Rules: Additional charges may apply for changes in addition to any fare rules listed.
NONREF/0VALUAFTDPT/CHGFEE
Cancel reservations before the scheduled departure time or TICKET HAS NO VALUE.

eTicket Travel Reminders

- **Check-in Requirement** - Bags must be checked and boarding passes obtained at least 30 minutes prior to scheduled departure. Baggage will not be accepted and advance seat assignments may be canceled if this condition is not met.
- **Boarding Requirement** - Passengers must be prepared to board at the departure gate with their boarding pass at least 15 minutes prior to scheduled departure.
- Failure to meet the **Boarding Requirements** may result in cancellation of reservations, denied boarding, removal of checked baggage from the aircraft and loss of eligibility for denied boarding compensation.
- Bring your boarding pass or this eTicket Receipt along with photo identification to the airport.
- The FAA now restricts carry-on baggage to one bag plus one personal item (purse, briefcase, laptop computer, etc.) per passenger.

ATLANTA-HARTSFIELD INT'L

RR 599721135

#01

GREG

CHMURA

VEHICLE: 01998 / 1163468
07SNFE LIC: NJ VNC24E

CDP: 00099
FF: COFB734604
RES: D6724723221 / ICAL / C
COMPLETED BY: 6463 / GAATL11
RENTED: NEW ORLEANS INT'L A/P
RENTAL: 06/11/07 10:47
RETURN: 06/14/07 12:28

PLAN IN: ICAL RATE CLASS: C
PLAN OUT: ICAL

MILES IN: 10148 TR-X MILES
MILES OUT: 9621 MILES ALLOWED
MILES DRIVEN: 527 MILES CHARGED

DAYS	3 @ \$	74.99 / DAY	\$	224.97
EX HOURS	1 @ \$	37.23 / HOUR	\$	37.23
SUBTOTAL			T\$	262.20
CONCESSION FEE RECOVERY			T\$	29.10
FF SURCHARGE			T\$	1.50
LDW	DECLINED			
LIS	DECLINED			
PAI, PEC	DECLINED			
FPO	ACCEPTED		\$	55.82
TAX 13.750% ON	292.80		\$	40.26
NET DUE			\$	388.88
PAID BY	DISC	XXXXXXXXXXS261		

FF: COFB734604 - 150 MILES
AWARDED

HOW WAS YOUR EXPERIENCE?
WE'D LIKE YOUR FEEDBACK.

- 1) Call 1-800-278-1595, or
Visit WWW.HERTZSURVEY.COM
- 2) Enter Access Code: 01640
- 3) Take Brief 4 Question Survey

THANK YOU FOR RENTING FROM

HERTZ

Name & Address

CHMURA, GREG
322 Evelyn Avenue

Seven Hills, OH 44131
US

CHMURA ECONOMICS AND ANALYTICS

Room 315/Q2
Arrival Date 06/11/07 2:52PM
Departure Date 06/13/07

Adult/Child 1/0
Room Rate 160.55

RATE PLAN L-AA

HH#

AL:

BONUS AL:

CAR:

Confirmation Number : 3284341918

06/13/07 PAGE 1

DATE	DESCRIPTION	ID	REF. NO	CHARGES	CREDITS	BALANCE
06/11/07	GUEST ROOM	CPA	378644	\$160.55		
06/11/07	STATE TAX	CPA	378644	\$6.42		
06/11/07	CITY TAX	CPA	378644	\$6.42		
06/12/07	*GREAT AMER GRILL	KWP	378700	\$9.71		
06/12/07	*RUBY TUESDAY DELIVERY	MMA	378873	\$15.27		
06/12/07	GUEST ROOM	CPA	379032	\$160.55		
06/12/07	STATE TAX	CPA	379032	\$6.42		
06/12/07	CITY TAX	CPA	379032	\$6.42		
	WILL BE SETTLED TO DS *5261					\$371.76
	EFFECTIVE BALANCE OF					\$0.00

Zip-Out Check-Out®

Good Morning ! We hope you enjoyed your stay. With Zip-Out Check-Out® there is no need to stop at the Front Desk to check out.

- Please review this statement. It is a record of your charges as of late last evening.
- For any charges after your account was prepared, you may:
 - + pay at the time of purchase.
 - + charge purchases to your account, then stop by the Front Desk for an updated statement.
 - + or request an updated statement be mailed to you within two business days.

Simply call the Front Desk from your room and tell us when you are ready to depart. Your account will be automatically checked out and you may use this statement as your receipt. Feel free to leave your key(s) in the room.

Please call the Front Desk if you wish to extend your stay or if you have any questions about your account.

DATE OF CHARGE	FOLIO NO./CHECK NO. 88796 A	
AUTHORIZATION	INITIAL	
PURCHASES & SERVICES		
TAXES		
TIPS & MISC.		
TOTAL AMOUNT		

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Greg Chmura
322 Evelyn Avenue
Seven Hills Oh 44131 United, States

A/R Number

Card Code

Room No. 227
Arrival 06-13-07
Departure 06-14-07

1 of 1

Cashier No

44

Code

PG

www.6c.com

Date		Charges	Credits
06-13-07	*Accommodation	90.00	
06-13-07	Lodging Tax	11.70	
Total		101.70	0.00
Balance		101.70	

Guest Signature: _____

I have received the goods and / or services in the amount shown on this bill. I agree to pay the full amount of these charges. If a credit card charge, I further agree to perform the obligations set forth in the cardholder's agreement with the issuer. This bill is not waived and agree to be held personally liable in the event that the indicated person, company, or association fails to pay for these charges.

Express
2000
Telephone: (330) 502-7090

STARBUCKS "D"
HOPKINS INT'L AIRPORT

6749 Linden

CHK 8420 JUN11'07 7:57AM GST 1

Thank You For Eating At
MCDONALDS 11322
370 VOTERS RD HEY & I10 HWY 433
SLIDELL, LA 70461

!! THANK YOU !!

TEL# 9856496077 Store# 11322

KS#2 Jun.11'07 (Mon) 12:28

MFY side 1 KVS order 400

QTY ITEM	TOTAL
1 CHEESEBURGER	1.29
1 SML WATER	0.00
Subtotal	1.29
Tax	0.11
Take-Out Total	1.40
Cash Tendered	2.00
Change	0.60

1 TAL COD T 1.70

Subtotal 1.70

Amt Paid 1.70

Cash 20.00

Change Due 18.30

Questions or Comments?

Please contact us @

paul.harris@hmshost.com

MCALISTERS DELI

DAPHNE, AL

6882 US HWY 90 STE. 1

DAPHNE, AL 36526

(251) 621-7179

EMP: MERCEDES W DISCOVER
Date 06/11/07 Time 16:35
Table 85
154268

Card Holder CHMURA/GREGORY JOSEPH
Card Number xxxxxxxxxx15261 xx/xx
Auth-Code.. 011055 Ctrl: 13647

Amount.. 9.31

Tip.... 2.00

Total.. 11.31

X

Cardmember agrees to pay total in
accordance with agreement governing
use of such card.

*** Customer Copy ***

MCALISTERS DELI

DAPHNE, AL
6882 US HWY 90 STE. 1
DAPHNE, AL 36526
(251) 621-7179

354329
ANGELA W Table 210
Tue 06/12/07 11:14 AM Guests 6

1 GCB	6.59
1 SIDE SALAD	1.49
1 REGULAR HOUSE	0.00
1 POTATO SALAD	0.89
1 WITH MEAL	0.00
1 CC. COOKIE	1.00

SubTotal 9.89
Taxes... 0.85

Total 10.74

DISCOVER Amount Applied 10.74

DISCOVER Tendered 10.74

*** Thanks for Choosing ***
*** McAlister's Deli ***

*** Call us for all of your ***
*** catering needs ***
*** HAVE A GREAT DAY!!! ***

RUBY TUESDAY

RT4619

Credit Card Voucher

Date: Jun13'07 08:36PM
Card Type: Discover
Acct #: XXXXXXXXXXXX5261
Exp Date: XX/XX
Auth Code: 013988
Check: 3794
Table: 604/1
Server: 675 Christin
GREGORY JOSEPH CHMURA

Subtotal: 16.39

Gratuity: 3.30

Total: 19.69

[Signature]
Signature

GUEST COPY

(Please retain for your records)

WELCOME

50 128 600017
SHELL
I-65 & HWY 83
EVERGREEN AL
36401

INVOICE # 075366
DATE 06/13/07 05:44
AUTH # 013929

DISCOVER
ACCOUNT NUMBER
XXXX XXXX XXXX 5261

PUMP PRODUCT \$/G
04 REG \$3.019

GALLONS FUEL TOTAL
10.118 \$30.55

THANK YOU
COME BACK SOON

HMSHost BURGER KING Store #9702
BURGER KING/CINNABON DF-8
ATLANTA HARTSFIELD INT'L AIRPORT

12985 LATIA

CHK 2623 JUN14'07 1:47PM

1 TEND CRISPY SAND 3.79

SUBTOTAL 3.79
TAX 0.27
AMOUNT PAID 4.06
CASH 20.06
CHANGE DUE 16.00

ATLANTA HARTSFIELD INT'L AIRPORT

If we did exceed your
expectations or if we did not
exceed your expectations, we
would love to hear from you

(404) 838 1026

tim.slaney@hmshost.com

Your order number is: 2623

Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
6/17/2007	1036a

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Columbia, SC, presentation on June 5, 2007: Chris Chmura	1	1,200.00	1,200.00
Reimbursement for mileage (795 miles at \$0.485 per mile)	795	0.485	385.58
Reimbursement for Food (scanned invoices sent as separate e-mail)		12.01	12.01
Reimbursement for Parking		4.00	4.00
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: left;"> <p>PAID</p> <p>6/26/07</p> <p>CK 116470</p> <p>ENTERED</p> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>APPROVED</p> <p>JUN 16 2007</p> <p>TERESA CHASTEEN PRESIDENT</p> </div> </div>			
Total			\$1,601.59
Payments/Credits			\$0.00
Balance Due			\$1,601.59

2064 COUNTER JUN. 05, 2007

UNCLASSIFIED

MUSCHALL'S 3955
S#1
Jun. 05 '07 (Tue) 11:04
Store# 3956
REF# R807-6635001
TEL# (916) 955-8375

AMEX	\$	6.57
CHARGE TIP	\$	0.00
ACCOUNT#	:	:
AUTH#	:	:

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1 CHICKEN CLUB-SRL	3.80
1 W/O MAYO	
1 MED DIET COKE	1.30
SUB TOTAL	5.10
TAX	0.34
TOTAL	5.44

TAKE-OUT

SM MESQUITE	4.39
BTL SODA	1.69

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CARD ISSUER ACCOUNT # *****2109
AMEX SALE
TRANSACTION AMOUNT
AUTH CODE 538981 SEQ# 1510

QUIZ NOS 5433
TELL US HOW WE ARE DOING
GO TO WWW.TELLQUIZNOS.COM
OR CALL (800) 798 3989
AND WIN CASH OR GIFT CARDS!!

CHARGE	0.00
CHG INDEXED	0.00

E REVERSE.

WIN CASH! SEE REVERSE.

WIN CASH! SEE REVERSE.

Chmura Economics & Analytics


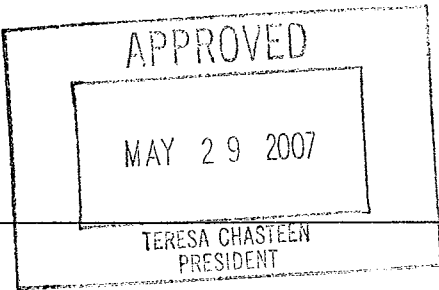
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
5/28/2007	1029a

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Columbia, SC, presentation on May 14, 2007: Chris Chmura		1,200.00	1,200.00 ✓
Columbia, SC, presentation on May 14, 2007: Leslie Peterson		1,000.00	1,000.00 ✓
Reimbursement for Mileage (795 miles at \$0.485 per mile)	795	0.485	385.58 ✓
Reimbursement for Hotel and Food (scanned invoices sent as separate e-mail)		153.82	153.82 ✓
<div style="text-align: center;">  CK # 16335 6/5/07 </div> <div style="text-align: center;">  MAY 29 2007 TERESA CHASTEEN PRESIDENT </div>			
Total			\$2,739.40
Payments/Credits			\$0.00
Balance Due			\$2,739.40

50 ENTERED



WINGATE INN
8300 TWO NOTCH ROAD

May 28, 2007
8:16 pm

COLUMBIA, SC 29223
Phone: (803)699-9333 Fax: (803)699-6588

CHRIS CHMURA
1309 E. CHERRY ST
Richmond, VA 23219

Account #: 57424
Room Number: 223
Rate: \$113.52
Pay Method: XXXXXXXXXXXX2009 AX

Arrival Date: Sunday, May 13, 2007
Departure Date: Monday, May 14, 2007

Member #:

Information

Date	Department	Reference	Voucher	Room	Debit	Credit
05/13/07	Room postings	Auto Posted		223	\$113.52	
05/13/07	STATE TAX	Auto Posted		223	\$6.81	
05/13/07	CITY TAX	Auto Posted		223	\$2.27	
05/13/07	DEVELOPMENT/TOL	Auto Posted		223	\$3.41	
05/14/07	AMERICAN EXPRESS			223		\$126.01

As a TripRewards member, you could have earned 1,135 points for this stay.
To become a member visit us at triprewards.com or call 1-800-FOR-TRIP

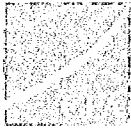
Tax Summary	
STATE TAX	\$6.81
CITY TAX	\$2.27
DEVELOPMENT	\$3.41
Balance	\$0.00

I agree that my liability for all charges is not waived. This property is independently owned and operated under license from Wingate Inn. Contact the Front Desk Manager about any billing issues.

Notice: This property maintains a NO PETS policy, with the exception of service animals.

Signature _____

Please contact the Manager about any issues with your stay.
Wingate Inn or affiliates may contact you about goods and services unless you call 877-333-8683 or write to Box 27970, Minneapolis, MN 55427-0970 to opt out.
View our Wingate Inn website about privacy.



Chmura Economics & Analytics
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

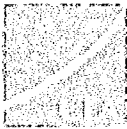
Date	Invoice #
5/2/2007	1022

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Retainer for JobsEQ South Carolina	0.3	75,000.00	22,500.00
Adding CRC functionality to JobsEQ for WIN in South Carolina	1	8,500.00	8,500.00
<div>PAID 5/21/07 CK 16251 ENTERED UPS - overnight</div> <div>APPROVED MAY 21 2007 TERESA CHASTEEN PRESIDENT</div>			

Federal Identification Number is 54-1923150	Total	\$31,000.00
	Payments/Credits	\$0.00
	Balance Due	\$31,000.00



Chmura Economics & Analytics
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
5/2/2007	1021

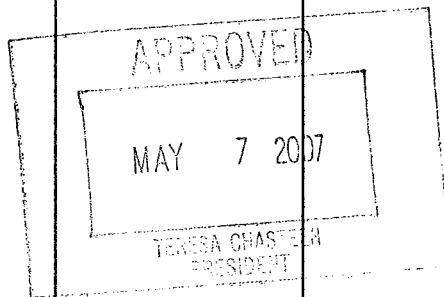
Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Remaining balance for JobsEQ Alabama	1	7,500.00	7,500.00
Federal Identification Number is 54-1923150		Total	\$7,500.00
		Payments/Credits	\$0.00
		Balance Due	\$7,500.00



PAID
5/11/07
CK #
16199



ENTERED

Chmura Economics & Analytics


1309 East Cary Street, Lower Level
Richmond, VA 23219

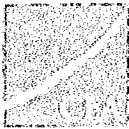
Invoice

Date	Invoice #
4/19/2007	1015

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
CRC database development for Georgia		1,700.00	1,700.00
Reimbursement for Dundas License		2,250.00	2,250.00
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>PAID <i>4/27/07</i> <i>CK 10123</i></p> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>APR 20 2007</p> <p>TERESA CHASTEEN</p> <p>1000 WATERFORD PLACE</p> <p>ENTERED</p> </div> </div>			
All work is complete!		Total	\$3,950.00
		Payments/Credits	\$0.00
		Balance Due	<u>\$3,950.00</u>



Chmura Economics & Analytics
1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
3/30/2007	1002

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
CRC database creation for Florida Strategic Compass		650.00	650.00
<div>APPROVED MAR 30 2007 TERESA CHASTEEN PRESIDENT</div> <div>PAID 4-4-07 CK 15974</div>			
Total			\$650.00

Payments/Credits	\$0.00
Balance Due	\$650.00

ENTERED


1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
2/9/2007	990A

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
Chris Chmura presentation to Auburn-Opelika workforce development task force	1	1,200.00	1,200.00
Airfare for Chris Chmura from Richmond, VA to Montgomery, AL	1	331.61	331.61
Rental car (2 days)	2	28.98	57.96
		0.00	0.00
Chris Chmura presentation to Mobile workforce development task force	1	1,200.00	1,200.00
Airfare for C. Chmura from Richmond, VA to Mobile, AL	1	517.10	517.10
Cab from airport to hotel	1	30.00	30.00
Riverview Plaza Hotel	1	79.25	79.25
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="border: 1px solid black; padding: 10px; text-align: center;"> APPROVED FEB 13 2007 TERESA CHASTEEN PRESIDENT </div> <div style="text-align: right;">  <div style="border: 1px solid black; padding: 5px; text-align: center;"> PAID <u>2/15/07</u> CR #15735 </div> </div> </div>			
Federal Identification Number is 54-1923150		Total	\$3,415.92
		Payments/Credits	\$0.00
		Balance Due	\$3,415.92

 ENTERED

Mobile, AL



Booked items

We're sorry, this booking did not qualify for ThankYouSM Points. [Why not?](#)
[Learn more](#) about how to earn points for future bookings.



Flight: Richmond to Mobile

[back to top](#)

Expedia.com itinerary number: **118615657716**
 Airline ticket number(s): 0067812913144
 Delta confirmation code: CQQ6FB

Main contact: Christine Chmura
 E-mail: chris@chmuraecon.com
 Home phone: (804) 337-0072

Traveler and cost summary

Christine Chmura	Adult	Delta #4006105769	\$439.06
		Update Frequent Flyer number(s)	
		Taxes & Fees	\$73.04
		Booking Fee	\$5.00
		Total (American Express)	\$517.10

[Change this flight](#) [Print a receipt](#) [View cancellation information](#)

Flight summary

To verify flight information, you can check your flight status and departure gate online, or contact the [airline](#) directly. Seat assignments, meal preferences, and special requests must be confirmed with the airline; we cannot guarantee that they will be honored.

Wed 7-Feb-07

Richmond (RIC) to **Atlanta (ATL)** 481 mi
 Depart 12:25 pm Arrive 2:23 pm (774 km)
 Duration: 1hr 58mn



Flight: 5193
 Operated by: COMAIR INC

Economy/Coach Class (10A), Canadair RJ
 Please check in with **Comair**. If checking in at a kiosk, use your name rather than confirmation number.

Atlanta (ATL) to **Mobile (MOB)** 302 mi
 Depart 3:15 pm Arrive 3:30 pm (486 km)
 Duration: 1hr 15mn



Flight: 4396
 Operated by: ATLANTIC
 SOUTHEAST

Economy/Coach Class (12A), Canadair RJ

Total distance: 783 mi (1,260 km)

Total duration: 3hr 13mn (4hr 5mn with connections)

Thu 8-Feb-07

Mobile (MOB) to **Atlanta (ATL)** 302 mi
 Depart 3:55 pm Arrive 6:08 pm (486 km)
 Duration: 1hr 13mn



Flight: 4564
 Operated by: ATLANTIC
 SOUTHEAST

Economy/Coach Class (12A), Canadair RJ
 Please check in with **Atlantic Southeast**. If checking in at a kiosk, use your name rather than confirmation number.

<http://www.expedia.com/pub/agent.dll?qscr=open&itid=186156577&vwtp=4>

2/5/2007

RIVERVIEW PLAZA HOTEL

GUEST FOLIO

1420 CHMURA/CHRIS
ROOM NAME
CNKG
TYPE

60.00 02/08/07 12:00 3620
RATE DEPART TIME ACCT#
02/07/07 16:57
ARRIVE TIME

30 401 ADMS AVE
ROOM ADDRESS
CLERK

MONTGOMERY AL 36103

PAYMENT

MR#:

DATE	REFERENCE	CHARGES	CREDITS	BALANCE DUE
02/07	TELECOMM	TELECOM 9.95		
02/07	TAX	TELECOM .90		
02/07	ROOM	1420, 1 60.00		
02/07	RM TAX	1420, 1 8.40		
02/08	AX CARD		\$79.25	

TO BE SETTLED TO: AMERICAN EXPRESS CURRENT BALANCE .00

Livery Cab Co.

Office (251) 776-7474 Cell (251) 454-7502

From: *Mobile Support*
To: *Riverview Plaza*
Date: *2-07-07*
AMT: *\$30*

RIVERVIEW PLAZA HOTEL
64 SOUTH WATER STREE
MOBILE, AL 36602
PH# 251-438-4000 FAX# 251-415-0123

This statement is your only receipt. You have agreed to pay in cash or by approved personal check or to authorize us to charge your credit card for all amounts charged to you. The amount shown in the credits column opposite any credit card entry in the reference column above will be charged to the credit card number set forth above. (The credit card company will bill in the usual manner.) If for any reason the credit card company does not make payment on this account, you will owe us such amount. If you are direct billed, in the event payment is not made within 25 days after check-out, you will owe us interest from the check-out date on any unpaid amount at the rate of 1.5% per month (ANNUAL RATE 18%), or the maximum allowed by law, plus the reasonable cost of collection, including attorney fees.

Signature X _____

Montgomery, AL



Booked items

We're sorry, this booking did not qualify for ThankYouSM Points. [Why not?](#)
[Learn more](#) about how to earn points for future bookings.



Flight: Richmond to Montgomery

[back to top](#)

Expedia.com itinerary number: **118362979410**
 Airline ticket number(s): 0377806367924-926
 US Airways confirmation code: LVXGEX

Main contact: Christine Chmura
 E-mail: chris.chmura@chmuraecon.com
 Home phone: (804) 337-0072
 Work phone: (804) 643-3640

One or more of the frequent flyer account numbers you entered were not recognized. To ensure that you receive proper credit, please update your frequent flyer number by clicking the link below.

Traveler and cost summary

Christine Chmura	Adult	Delta #4006105769 Update Frequent Flyer number(s)	\$267.91
leslie peterson	Adult	Add Frequent Flyer number(s)	\$267.91
			Taxes & Fees \$117.40
			Booking Fee \$10.00
Total (American Express)			\$663.22

[Change this flight](#) [Request seat changes](#) [Print a receipt](#) [View cancellation information](#)

Flight summary

To verify flight information, you can check your flight status and departure gate online, or contact [the airline](#) directly. Seat assignments, meal preferences, and special requests must be confirmed with the airline; we cannot guarantee that they will be honored.

Mon 22-Jan-07

Richmond (RIC) to Charlotte (CLT) 257 mi
 Depart 12:00 pm Arrive 1:07 pm (414 km)
 Duration: 1hr 7mn

Flight: 2303
 Operated by: US AIRWAYS
 EXPRESS-PSA AIRLINES

Economy/Coach Class ([Seat assignments upon check-in](#) [More Information](#)), Canadair RJ

Charlotte (CLT) to Montgomery (MGM) 374 mi
 Depart 3:39 pm Arrive 3:59 pm (602 km)
 Duration: 1hr 20mn

Flight: 2393
 Operated by: US AIRWAYS
 EXPRESS-PSA AIRLINES

Economy/Coach Class (07F, 07D), Canadair RJ

Total distance: 631 mi (1,015 km)

Total duration: 2hr 27mn (4hr 59mn with connections)

Wed 24-Jan-07

Montgomery (MGM) to Charlotte (CLT) 374 mi
 (602 km)



<http://www.expedia.com/pub/agent.dll?qscr=open&itid=1183629794&vwtp=4>

1/2/2007

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Chmura Economics & Analytics


1309 East Cary Street, Lower Level
Richmond, VA 23219

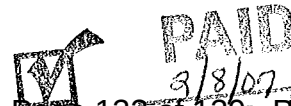
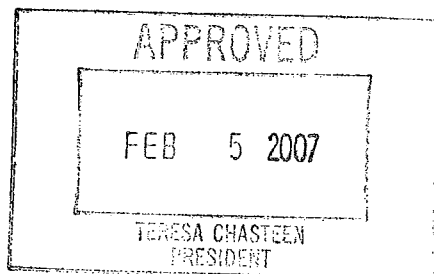
Invoice

Date	Invoice #
2/1/2007	988A

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
CRC database creation for Alabama Strategic Compass	1	7,500.00	7,500.00
			
Federal Identification Number is 54-1923150		Total	\$7,500.00
		Payments/Credits	\$0.00
		Balance Due	\$7,500.00



Chmura Economics & Analytics

1309 East Cary Street, Lower Level
Richmond, VA 23219

Invoice

Date	Invoice #
10/9/2006	949A

Bill To
WIN Teresa C. Chasteen, Ph.D., President 1000 Waterford Place Kingston, TN 37663

P.O. No.	Terms	Project
	Due Upon Receipt	

Description	Qty	Rate	Amount
30% Retainer for JobsEQ and the WIN Strategic Compass for Alabama	225,000	0.30	67,500.00
Federal Identification Number is 54-1923150			Total \$67,500.00
			Payments/Credits \$0.00
			Balance Due \$67,500.00

 **ENTERED**
**PAID**

10/27/06

#15134

EXHIBIT D

Statement of Work

Effective February 25, 2008, Chmura Economics & Analytics (Chmura) will enter into a retainer agreement with Worldwide Interactive Network, Inc. (WIN) for work performed on the Skills Bank application. Chmura will work a minimum of 20 hours per month on the tasks/services listed below for an rate of \$100 per hour. Chmura will allocate staff in order to complete at least 20 hours (4 hours for the last week of February) of work per month on the Skills Bank application. Note: at this time, Chmura does not have the staff to guarantee accommodating last minute, "emergency" requests beyond the initial 20 hours. Therefore, it is imperative to give advanced notice of additional work requests so that Chmura staff can be scheduled accordingly.

Skills Bank Application Task/Service List:

1. Data and Web Server Management

Chmura will make necessary configuration changes and provide configuration support to IIS web servers and SQL Server databases servers as required by the Skills Bank. Chmura is not responsible for the server hardware, operating system, or other services running on these servers.

2. Data Services

Chmura will perform the following data services related to the Skills Bank:

- a. Bulk data import
- b. Data cleanup
- c. Data analysis
- d. Other data transformations

3. Programming

Chmura will provide programming services to make improvements and modifications to the Skills Bank including the Web (front-end), Database (back-end), and Reports.

4. Application and Database Maps

Chmura will provide WIN with application and database maps outlining the functional components of the Skills Bank application.

5. User Documentation

Chmura will create general front-end user documentation for use on all Skills Bank Sites.

6. Source Code

Chmura will provide a snapshot of the most recent source code to WIN. This will include Web source files, C# class files, Database queries, Report source files, and User Documentation source files.

7. Training Support for WIN In-House Developer

Chmura will make staff available to answer Skills Bank application technical questions from a WIN In-House developer.

In order to provide services #1 and #2 above, WIN will provide Chmura with VPN and Remote Desktop Access to the WIN servers that host the Skills Bank application.

The period of performance for this agreement is 3 months beginning on the effective date. At the end of the period of performance, Chmura and WIN will re-evaluate this agreement.



2-15-2008

Leslie Peterson

(Date)

Teresa Chasteen

(Date)

EXHIBIT E

From: Fletcher Mangum [mailto:fletcher@mangum-consulting.com]
Sent: Wednesday, March 04, 2009 6:41 PM
To: Teresa Chasteen
Subject: Re: Copy of the letter

Teresa,

I apologize for the delay. The letter was with my attorney, Rob Brooke, and it took a while to catch up with him. The letter makes two accusations. The first is that I am working with you to develop a competitive application to JobsEQ. The relevant paragraph states:

"Chmura has reason to believe that you may be working with Worldwide Interactive Network, Inc. (WIN) to try to develop a software application that would compete with Chmura's proprietary software product, JobsEQ. Any software application you may write or contribute to will be subject to close scrutiny by Chmura to determine whether such software infringes on JobsEQ. Furthermore, Chmura will take all legal action necessary to protect its software and to compensate itself for any damages it incurs as a result of such infringement."

The second accusation regards a separate matter. It asserts that I made statements to a client here for which she and I have both done work that were intended to harm her. I disagree with that assertion and am prepared to contest

it if necessary.

My attorney has reviewed both accusations and based on the circumstances and the nature of the threat (the letter was sent regular mail, with no demand for a response, by an attorney who specializes in labor law, from a firm that specializes in estate planning), deems them a simple attempt to intimidate me. That said, he has advised me not to roil the waters by distributing the letter in its entirety or by discussing the second accusation.

This is frankly a very uncomfortable area for me. I'm a researcher more than anything else and have never been in this kind of situation before. As a result, I feel obliged to follow the advise of my attorney.

Best regards,

Fletcher

On Tue, Mar 3, 2009 at 3:21 PM, Teresa Chasteen <tchasteen@w-win.com> wrote:

Hi Fletcher—

Can you please send a copy/scan of the letter from Chmura. It will only be shared with attorney, John Brock to write the indemnification language.

Thanks, Teresa

Teresa C. Chasteen, Ph.D.

President, Worldwide Interactive Network (WIN)

1000 Waterford Place

Kingston, TN 37763

888-717-9461 ext. 2207

tchasteen@w-win.com

--

A. Fletcher Mangum, Ph.D.
Managing Partner
Mangum Economic Consulting, LLC
50 Pear Street
Richmond, VA 23223
804-771-5338